

ASSESSING BRAZILIAN CREATIVITY WITH TORRANCE TESTS

SOLANGE MUGLIA WECHSLER
BRAZIL

Book chapter:

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Wechsler, S. M. (2003) Assessing Brazilian creativity with Torrance Tests. In M.S. Stein (org) Creativity Global Correspondents-2003. New York: Winslow Press

The question of predicting creativity is the main concern of international scholars. The issues raised by them is how to find measures which can be considered valid and reliable indicators of creativity through it various dimensions. Among the great variety of instruments dedicated to assess creativity, the Torrance Tests of Creative Thinking (Torrance, 1966, 1990) are the one mostly researched measure around the world

The question of predicting creativity with Torrance's instruments has been largely investigated in the literature in the last thirty years, not only in the seminal work conducted by Torrance (1972) but in many studies carried out in different countries , in populations with diverse cultural characteristics, as reviewed by Torrance, Dogan and Horn (1981). More recently, Plucker(1999), confirmed the prediction power of Torrance's tests, when comparing their results with scores on intelligence measures and information on adult's creative achievements.

The studies carried by Torrance and his followers (Torrance, 2000) have confirmed the value of 17 figural creative characteristics to predict the quantity and quality of creative achievements of grade 3, 4, 5 and 6 children when reaching adulthood. These figural creative indicators were: fluency, originality, abstractness of titles, elaboration, resistance to closure, emotional expressiveness, storytelling articulateness, movement , expressiveness of titles, synthesis of figures, synthesis of lines, unusual visualization, internal visualization, humor, richness of imagery, colorfulness of imagery and fantasy. No additional variables for scoring the verbal tests, other than the 3 measures already known (fluency, flexibility, originality) were proposed by Torrance.

The possibility of identifying more creative strengths in Torrance's verbal test was confirmed by Wechsler's findings (1981, 1985) with samples of distinct cultures. First, with a North-American sample, using Torrance's longitudinal sample, it was verified the potential power of five verbal indicators to predict real life creative achievements, besides the other three existing measures, which were: Expression of Emotions, Elaboration, Fantasy, Unusual Perspective and Analogies. Later on, with a Brazilian sample, the same creative characteristics yielded significant associations with self evaluation of creative achievements. The information provided by these studies aggregated important affective dimensions to the scoring of the verbal creativity tests.

Cultural differences tend to appear in children's figural production, when compared for creativity indicators. North American elementary school children, for instance, tend to express more humor and to add more context to their drawings than Brazilian children, who have higher frequency of drawings demonstrating emotions and internal perspective than their counterparts. (Wechsler & Richmond, 1982) On the other hand, traditions and folklore legends existing in each region, have strong influence on the type and content of literary expression, as observed among Brazilian writers and poets (Wechsler, 2000). Finding from cross-cultural research relating Brazilian and North American thinking and learning styles, also indicated diversity among them, being the first group more motivated by peers and adults than the latter (Wechsler, 1993a). These results pointed to the need to study creativity manifestation according to each culture values and styles, and raised the question if there are cross-cultural traits indicating creativity, and if more predominant characteristics exist in a specific nation.

Societies tend to recognize their talents through prizes or awards, so one could possibly identify creativity using this criteria. Therefore, the purpose of our study was to verify if the verbal and figural creative characteristics presented in the TTCT could be used as predictors for real life creative achievements in the Brazilian culture; considering the standards within this culture for creative production.

Method

Participants

The participants were 128 individuals, 59 (30 women, 29 men) considered as creative and 69 (38 women, 31 men) considered as non-creative or regular. Their age

ranged from 18 through 75 years (mean= 33) and their educational level was equal to secondary school or above..

Creativity criterion was defined by the social recognition of the subjects' production, by means of local, state or national prizes. Different types of award were represented in this sample pertaining to the following areas: visual arts, choreography, publicity, literature, sports, music, education, medicine, psychology ,philosophy, engineering and sociology. Quantity of creative achievements recognized through awards averaged 2,38 for men and 1,93 for women.

Material

Thinking Creatively with Pictures-Figural A (Torrance, 1990).

This test is composed by three activities where there are different set of scribbles and forms to be completed. The scoring system used was based on the streamlined procedure developed by Torrance and Ball (1978) which presents a broad understanding of cognitive and affective process involved in figural creativity.

Thirteen figural creative characteristics were scored in this test, which were: fluency, flexibility , originality, elaboration, expression of emotions, fantasy, movement, internal perspective, uncommon perspective, context, combinations, expressiveness of titles and extension of boundaries. Four other characteristics proposed by Torrance and Ball (1978) were left out as they had low rater reliability due to more subjective scoring. A Figural Creativity Index I was derived by adding the first four characteristics, as they have been regarded as measure of divergent thinking , or more cognitive. A Figural Creativity Index II was organized, by adding all 14 characteristics, since they belong to both cognitive and emotional domains, thus providing better understanding of figural creativity.

Thinking Creatively with Words- Form A (Torrance, 1990) . This test is composed by six activities, where the first ones requires to produce questions, causes and consequences for a situation depicted in one picture, the fourth demands for creative ideas to improve a product, the fifth requires ideas to use tin cans and the sixth to provide solutions for an imaginable situation.

Traditional scoring for this test resumes on three main characteristics: fluency, flexibility and originality. Wechsler's procedure (1981, 1985) for broadening this test

scope, previously validated with North American and Brazilian samples was used, by adding more five verbal creative characteristics, which were: originality, elaboration, emotional sensibility, fantasy, uncommon perspective, and analogies. A Verbal Creativity Index I was composed by adding the first four characteristics as a measure of cognitive components. A Verbal Creativity Index II was derived by adding all 8 characteristics, considered to be a better indicator of emotional as well as cognitive components of verbal creativity.

Survey of creative achievements This survey was composed by open ended questions to evaluate the type and quantity of real life creative achievements recognized through awards and special distinctions, and those which were accomplished but did not receive any prizes or recognition by society. Questions related to production in the mostly diverse areas, such as : poetry, literature, painting, music, drama, journalism, publicity, visual arts, sports, scientific invention, etc. This survey was elaborated based on Torrance and Wu's 1981 longitudinal study of creative achievements

In order to investigate the predictive value of the figural and verbal tests, we used the Pearson correlation analysis, comparing each creative characteristics with recognized creative achievements, non recognized achievements and total creative achievements.

Results

The results obtained by comparing the TTCT figural and verbal tests with creative achievements indicated that both measures can be considered as valid predictors of creativity.

All figural creative characteristics but Fantasy, Internal Perspective and Combinations had significant relationships with total creative achievements (recognized and not recognized achievements). Considering only the prediction of recognized achievements, the best indicators were : Extension of Boundaries and Expressiveness of Titles ($p \leq 0,01$) and moderate indicators were: Fluency, Elaboration, Originality, Fantasy ($p \leq 0,05$) Non recognized achievements were best predicted by Originality and Movement in the Drawings ($p \leq 0,01$) and to a minor degree by Use of Context in

Drawings.. The Figural Creativity Index I and II had high significant relationships with recognized, not recognized and total creative achievements ($r \geq 0,18$, $p \leq 0,05$)

Verbal creative characteristics were all significant related to total creative achievements. All verbal indicators but Fantasy and Analogies had high predictive power related to recognized creative achievements ($p \leq 0,02$). Considering the non recognized achievements, the best predictors were Fluency and Elaboration ($p \leq 0,05$) Both Verbal Indexes I and II had significant relationships with the recognized , non recognized as well as the total creative achievements ($r \geq 0,20$, $p \leq 0,05$)

Conclusions

This Brazilian study confirmed findings from other countries, specially the US, which indicated to be possible to predict creative achievements using the Torrance Tests of Creative Thinking.

The possibility of verifying the importance played by cognitive as well as affective indicators of creativity on adult's creative lives, using the TTCT, was confirmed again by this study. This is a important information for those who are interested only in the cognitive components of creativity, or are limited to the study of four unique components, such as Fluency, Flexibility, Originality and Elaboration.

Verbal creativity indicators were observed as being best predictors of creative achievement than figural ones. This result is consistent with Plucker's study (1999), when reanalyzes of Torrance's longitudinal data. Therefore, we might consider the importance of stimulating verbal abilities in order to increase the chances for creative achievements than to be restricted to emphasis on activities which emphasize only figural creativity as drawing, painting, etc.

A great contribution of this study was to verify the existence of cross-cultural characteristics which identify and predict creative behavior and production in different societal environments. This findings is vital for those who are interested on creativity development and need to be sure of the most important traits which need to be stimulated in different countries.

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