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Explicit Instructions & Creativity Judgment

Açık Yönergeler & Yaratıcılığın Değerlendirilmesi

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Abstract

Creativity assessment methods that rely on expert judges (i.e., the Consensual Assessment Technique) are resource intensive and particularly difficult to find expert judges, time intensive, and project costs are often obstacles to consider. Additionally, individual tendencies and subjective preferences play important roles in the assessments submitted by creativity judges. The CAT is one example of a system that used such judges; however, the CAT does not provide a solution for these resource requirements and CAT does not include training or norming for the expert judges. Furthermore, the transferability of the judges' training to another subject or domain is another avenue to minimize the resource requirement for these assessment measures. The present study investigated workshop training of creativity judges by providing Explicit Instructions (EIs) in order to make them better informed about originality and more aware of the processes involved in creative production. Idea Density and Keywords quantitative methods were used to objectively observe the EIs and the effects of such training in the study. The results demonstrated that non-expert judges can be trained, and showed that the judges' acquired knowledge can be transferred to other domains.

Keywords: explicit instruction, creativity assessment, judge training, divergent thinking

Öz

Yaratıcılığı ölçme anlamında uzman görüşlerini metot olarak kabul eden yöntemler (ör. Konsensus Değerlendirme Tekniği) kaynak kullanımı bakımından maddi ve manevi açıdan oldukça külfetlidir. Ayrıca, değerlendirmeyi yapan uzmanların kişisel eğilimleri ve objektif tercihleri yapılan değerlendirmeler üzerinde önemli bir rol oynamaktadır. Konsensus Değerlendirme Tekniği bu şekilde uzman görüşleri temelli yaratıcılığın değerlendirilmesinde kullanılan metotlardan biridir. Bu durumlardan yola çıkarak, değerlendirmeyi yapacak olan uzmanların eğitilmesi ve bu eğitimlerinin diğer farklı alanlara da transfer edilebilmesi yaratıcılıkta uzman görüşüne bağlı değerlendirme sistemlerinin maddi ve manevi yükünü hafifletmek adına bir başka çözüm yoludur. Burada sunulan çalışma yaratıcılıkta değerlendirme yapacak olan kişilere hazırlanan bir eğitim sonucunda Açık Yönergeler kullanılarak kişilerin yaratıcılığın önemli boyutlarından biri olan özgünlük hakkında daha derin bilgi sahibi olmaları ve yaratıcı düşünme sisteminin içine dâhil olan diğer yapıların farkında olunması durumunu incelemiştir. Idea Density ve Keywords isimli yaratıcılığın ölçümünde kullanılan iki farklı objektif ölçme metodu kullanılarak, bu çalışma içinde kullanılan Açık Yönergeler ve kişilerin aldıkları eğitimlerin etkisi araştırılmıştır. Çalışma sonucuna göre konusunda uzman olmayan kişilerin eğitilerek yaratıcılıkta konusunda uzman olan kişiler gibi değerlendirmeler yapabileceği ve öğrenilen bilgilerin farklı alanlara da transfer edilebileceğini ortaya çıkmıştır.

Anahtar Sözcükler: açık yönergeler, yaratıcılığın değerlendirilmesi, uzman eğitimi, çoğul düşünme

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Introduction

The Consensual Assessment Technique (CAT) was developed by Amabile (1982) and structured around the idea that the best measure of the creativity of a work is the combined assessment of experts in that field. The CAT is often used with other products and tends to have sufficient reliability ratings with inter-rater reliability ranges from .70 to .90 (Runco, 2010). The CAT can be described as the "gold standard" because it takes actual creative products into account, and it is not connected to any specific theory of creativity. It mimics the way creativity is measured in the "real world" (Sternberg & Kaufman, 2010). In order to designate appropriate expert judges, Amabile (1996) recommended relying on the experts' existing training and knowledge base in the target domain and she stated that an expert should have "at least some formal training and experience in the target domain" (p. 73).

Today using judges in creativity assessment is one of the most common methods that researchers utilize in order to evaluate the creativity level of products (Kaufman, Baer, Cole, & Sexton, 2008). However, assessments like the CAT do not include training or norming for the judges. For example, according to Amabile (1996) judges cannot be given rubrics to follow in making such judgments or in any other way be interfered with in their unconstrained assessments of an artifact's creativity when using the CAT. Additionally, Runco and his colleagues (Runco & Chand, 1994; Runco, McCarthy, & Svensen, 1994; Runco & Smith, 1992; Runco & Vega, 1990) questioned the idea of using "experts" as they questioned why experts would be more valid and useful than self-ratings or other evaluation methods.

Using experts as judges presents challenges, including finding, appropriate expert raters and relevant expenses, assessing appropriate expertise levels for an area, and planning and organizing appropriate studies in which to apply expert opinions (Plucker & Makel, 2010). The CAT and other expert methods are resource-intensive meaning they require much more time and financial resources when compared other creativity assessment methods. These considerations exemplify Runco's questioning of the feasibility of the CAT. Much of the research done using the CAT includes a panel of few judges. Amabile (1982) suggested 5 experts, but even this number is often time and cost prohibitive to obtain. Therefore, many CAT studies in the literature have only 1-2 experts, and this very low number of experts presents a concern for high inter-rater reliability with the CAT.

Runco and Smith's (1992) study discussed the interpersonal ratings of expert judges. In that study they stated that producing art and judging art requires different skills. Therefore, an artist might be able to evaluate their own work, but not other artist's work because of their own aesthetic biases. Another issue that Runco and Smith (1992) identified was that experts, by definition, come from an area in which they were highly trained; therefore, their judgment may rely on high-level, esoteric, idiosyncratic criteria. These judgment criteria reflect their specialized training, but not necessarily creativity per se and might not be appropriate to judge the art of non-professionals. The study by Runco et al. (1994) showed that expert judges were

not able to reflect differences among various groups as well as non-expert judges because the criteria used were not directly applicable to the artwork of students and, therefore, were overly critical.

Dollinger and Shaffran (2005) worked with training non-expert judges to evaluate the creativity of ideas and products. In their study, non-expert judges were provided with a set of drawings along with respective ratings as already submitted by experts in order to give them an idea about how to judge a product's level of creativity. The results showed that this training improved inter-judge reliability when compared to results that were obtained from a previous study (Dollinger, Urban, & James, 2004). This study also proved that non-expert judges could indeed be trained. However, this method still requires experts to train non-experts, and it is not known if this method can be transferred to other domains.

Research by Caroff and Besançon (2008) focused on two general traits of creativity judgments: originality and usefulness. They investigated the ways originality and usefulness concepts could affect the ratings of judges and how the personal characteristics of the judges could lead to individual differences in creativity ratings. Explicit Instructions or EIs are one of the most common ways to enhance a subject's creative performance on any given task. Harrington (1975) showed that when participants were instructed to "be creative", they tended to produce more creative ideas as measured by the Alternate Uses Test (Christen, Guilford, Merrifield, & Wilson, 1960; Wilson, Guilford, & Christensen, 1953) in comparison to those who did not receive such instructions. Caroff and Besançon (2008) investigated how EIs could make creativity judges more inclined to take both originality and usefulness into account when they rated the creativity of products. In order to achieve this goal, the researchers trained their participants in how to evaluate creativity immediately before the experimental task. They found that the originality level of advertisements had an important impact on creativity ratings. Therefore, creativity judges estimated the creativity of advertisements based on this dimension, which could not be modified by any instruction or training.

Another EI study along these same lines was done by Runco (1986) where he compared the divergent thinking (DT) scores of gifted and non-gifted students by applying EIs. The findings showed that EIs increased the originality scores for all children. However, gifted children showed greater increases in their originality scores than non-gifted children. Additionally, EIs inhibited the fluency and flexibility scores of gifted children more than it did for those of non-gifted children.

Chand and Runco (1993) compared the impact of explicit and standard instructions in their study. Real-world DT, real-world problem generation, and a combination of problem generation and DT tests were used in their study. The results showed significant differences among the tests, and differences between the explicit and standard instructional groups. Additionally, only the scores elicited by EIs were significantly correlated with and predictive of creative activities and accomplishments. These findings aligned with the rationale of using EIs that

encourage participants to perform at their best by clearly explaining what is expected from them because the most reliable estimate of an individual's potential is the person's maximal performance (Chand & Runco, 1993).

Runco and Okuda (1991) used EIs to maximize the different components of DT (e.g. ideational originality and ideational flexibility) in their study in addition to giving inexplicit directions. The directions to maximize the participants' potential led to an increase in originality and flexibility scores. However, contrary to expectations, flexibility scores were low when originality instructions were given. The researchers concluded that EIs do not influence participants' abilities to generate ideas, but rather manipulate the choice of specific ideational strategies (Runco & Okuda, 1991).

This study investigated how training creativity judges by applying EIs can make them more aware of originality and usefulness concepts as involved in creative thinking and production. The EIs and the creativity workshops in this study were designed to enhance the judges' attitudes and values regarding creativity. These particular methods and approaches were chosen to led the judges to transfer what they learned from this training to other domains.

In the current study, objective ID and keywords methods were applied to the same essays in order to observe the impact of EIs and training on the judgments of the participants. This comparison showed how objective and subjective scoring differed. EIs represented the independent variable and the qualities of judgments represented the dependent variable. Instructions for EIs included what creativity is, what is important for creative thinking, and other important components of creativity (e.g. appropriateness, originality).

This study sought to answer these following questions:

1. Can non-expert judges be trained to be better judges of creativity?
2. Can EIs make judges more reliable at evaluating creativity?
3. Can EIs and training enhance the beliefs of non-expert judges regarding creativity?
4. Does providing opportunities to apply acquired knowledge make for better internalization of such knowledge with EIs?

Method

Sample

The sample included (n=70) undergraduate level students from a large state university in the Southeastern United States majoring in various fields. Most of the participants (n=50) majored in humanities, social sciences, or arts; the remaining (n=20) majored in biological sciences; and three did not provide information about their majors. Fifty-nine students were female, and 11 were male. Their ages ranged from 18-20 and from 24-25 years. Only one student was over 25

years old.

Data Collection

Several professors and student organizations were contacted to invite their students and members to take part in the study. A freshman level art-related class volunteered to take part in this study. A whole class appointment was scheduled to meet with these students during their class time. They were briefed on the study during the class and were given instructions about how to complete the study. The participants were exclusively college students in order to demonstrate consistency in the semantic relationship data from participants at a similar level of education.

Instruments

Those students who consented to be part of the study began what will be referred to in shorthand as the creativity workshop. First, the participants were given the Attitudes and Values scale (A & V) in order to determine their beliefs with regard to creativity before the training commenced. Subsequently, six different previously written and randomly selected creative essays about different topics were given to the students to rate according to six criteria: creativity, technical skill, aesthetic, originality, flexibility, and fluency. Originality, aesthetic, and technical skill indices were taken from Csikszentmihalyi and Getzels (2014), and a creativity index was taken from Runco (1989).

Each of the participants used a five-level, Likert-type scale with the following response options: (1) Very low, (2) Low, (3) Average, (4) High, and (5) Very High. The essays were presented one at a time, and the students were allowed as much time as needed for the ratings. The first three essays were rated by the participants before EIs, and the remaining three were rated after EIs were given.

Procedure

Upon their completion of the ratings of the first three essays, the participants were given a set of EIs including relevant creativity definitions and concepts. This workshop focused on the following topics: “What is creativity?”, “What is important in creativity?”, “What constitutes Divergent Thinking?”, “What are the four DT indices?”, “What is the role of usefulness and originality in creative ideation?”, “What is subjective and objective scoring in creativity?”, and “What are the comparisons to convergent thinking?”.

All of the topics and terms listed above were defined as EIs, and the tasks used in this study were part of the training. This creativity workshop provided a knowledge base for the participants in order to transfer that knowledge base to other domains by defining terms clearly and providing explicit examples. Hence, general creativity traits were explained and discussed during this training, instead of focusing on a particular domain such as art, literature, or poetry. Researchers like Dollinger and Shaffran (2005) or Caroff and Besançon (2008) trained their

novice judges in particular areas in order to designate them expert-like judges; however, they did not obtain good reliability results or agreement. Additionally, they observed that these judges did not transfer their training to other domains. Therefore, this study applied a different, more general approach to the training of the judges.

After the creativity workshop, the A and V scale was given to the participants again in order to see the effect of the EIs on their beliefs about creativity. Subsequently, a new set of three essays was distributed to the participants to rate them for the same six criteria. These essays were also given out one at a time. A full copy of the A and V scale is in appendix A.

Each essay was analyzed using objective and subjective methods to assess the level of creativity. In order to obtain subjective judgments for the creativity level of these six essays, two experts from the field of creativity rated these essays according to the same six criteria provided to the participants, but these experts did not receive EIs, nor did they participate in any part of the creativity workshop.

For the objective judgments a computer program called CPIDR 5 was used to calculate the ID values of the essays. Also, the keywords method from the second was applied here with these six essays to provide another source of objective ratings. CPIDR 5 is a computer program that determines the propositional Idea Density (ID) of an English text. ID is a method used to analyze concept frequencies in written or oral works. An ID value is estimated by the total number of verbs, adjectives, adverbs, prepositions, and conjunctions divided by the total number of words. ID theory was developed from Kintsch (1974) and Turner and Greene's (1977) studies. According to Kintsch, English text tends to be constructed from propositional bases. "Propositions represent ideas and language expresses propositions, and hence ideas" (Kintsch, 1974, p. 5). ID, operationalized in terms of propositions, has proven to be useful in the linguistic research of Turner and Greene (1977) and Covington (2009). Runco et al. (in press) also investigated the usefulness of the ID method in terms of its relationship to DT, citation impact (CI), and eminence. Their study clearly showed that written or oral works having more ideas in them tend to be cited more frequently by other scholars, and the higher frequency of ID is related to both reputational change obtained from encyclopedic entries and to Ludwig's Creative Achievement Scale (CAS). Türkman and Runco's (in press) keywords method investigated the common words or phrases that are used to introduce original ideas in written works by examining language and attitude studies in creativity literature. Türkman and Runco's (in press) keywords study took these relationships into account and found specific words and phrases that are used with regularity when people introduce a new idea and this study provided an understanding of how creativity is expressed in written works. The keywords identified in the Türkman and Runco's (in press) study were tested by comparing different sources of writings and speeches and statistical analyses indicated that such keywords successfully identified original ideas in written works and speeches.

Results

Seventy participants judged the creativity level of six different essays and were given the A and V scale both before and after the creativity workshop. Statistical analyses indicated that the inter-item alpha coefficient was .75 for the A and V scale. This alpha coefficient was tested again after the creativity workshop, and the results showed that the inter-item alpha coefficient increased to .86.

The A and V results indicated that the total score after the EIs increased by 44 points for all the participants. A paired *t*-test investigated this increase and did not find it to be a significant difference ($"t(24) = -0.884, p = .38"$).

Inter-rater reliability analyses were conducted for the six essays. Statistical analyses indicated that the inter-rater alpha coefficient for essay 1 was .78, .77 for essay 2, and .87 for essay 3. These three essays were rated by the participants before the EIs. A composite score was calculated across dimensions for the first three essays to conduct further statistical analyses, and the overall inter-rater reliability alpha was .79 for these three essays. The EIs helped to increase the participants' alpha values. Statistical analyses revealed that the alpha values were .88 for essay 4, .92 for essay 5, and .93 for essay 6. Composites scores were also calculated for these essays, and the overall reliability alpha was .89. The EIs increased the overall alpha values from .79 to .89. All alpha reliability values are provided in Table 1.

Table 1. *Alpha Coefficients for the Essays*

Before the Workshop		**After the Workshop**	
Essay 1	.78	Essay 4	.88
Essay 2	.77	Essay 5	.92
Essay 3	.87	Essay 6	.93
Composites for 1, 2 & 3	.79	Composites for 4,5 & 6	.89

A paired *t*-test investigated the difference between experts' and the participants' scorings. The results indicated that there was a significant difference between the experts' and participants' scorings before the training ($t(2) = 5.20, p < .05$). The results for after the EIs were given revealed that this significant difference had disappeared ($t(2) = 1.77, p = .22$). Statistical analyses indicated that the fluency index had the lowest alpha value ($\alpha = .03$) among the six criteria. However, this alpha value increased to ($\alpha = .18$) after the creativity workshop. All the other alpha coefficients also increased after the EIs: the creativity index increased from ($\alpha = .27$) to ($\alpha = .38$); the technical skill index increased from ($\alpha = .21$) to ($\alpha = .38$); the aesthetic index increased from ($\alpha = .37$) to ($\alpha = .42$); the originality index increased from ($\alpha = .20$) to ($\alpha = .30$); and the flexibility index increased from ($\alpha = .33$) to ($\alpha = .41$). The overall reliability values for these six indices were ($\alpha = .44$) for creativity, ($\alpha = .46$) for technical skill, ($\alpha = .44$) for aesthetic, ($\alpha = .38$) for originality, ($\alpha = .50$) for flexibility, and ($\alpha = .47$) for fluency.

Discussion

It can be said that creativity is in the eye of the beholder. Many of the most popular methods for assessing creativity rely to a large extent on human judgments. Often professionals (e.g., artists) or other experts are asked to judge creative works (Csikzentmihalyi & Getzels, 1971; Runco, 1989), but self-ratings (Hocevar, 1981; Rothenberg, 1986) and peer ratings (Speecher, 1964) have also been used with some success. This means that a wide variety of human judgements are applicable in the assessment of creativity, which presented an opportunity for this study to investigate how judgments of creativity can be made by what would typically be considered non-expert judges. This ability to train larger pools of judges would make assessment models like the CAT more feasible and give researchers the ability to meet the 5 or more judge requirements outlined to optimize the CAT by Amabile (1982).

In this study non-experts participated in a series of trainings and were given a set of EIs. This idea of training of non-expert judges to evaluate a products' creativity has been investigated by researchers (Dollinger & Shaffran, 2005; Caroff & Besançon, 2008) previously, but the particular focus in this study was to provide a knowledgebase about creativity that is transferable to other domains and thus opportunities for the participants to understand and internalize this process better. Instead of focusing on a particular domain, general creativity traits were explained and discussed during the workshop for this study.

Two of the six criteria used by the participants to rate the creativity of the essays were not directly related to traditional dimensions of creativity (technical skill and aesthetic). These two criteria were originally used by Csikszentmihalyi and Getzels (1971) to rate art products. However, here EIs also increased agreement among the participants for these two criteria. The reliability values (alpha coefficients) increased from (α = .21) to (α = .38) for the technical skill index and from (α = .37) to (α = .42) for the aesthetic index. This finding is very important to demonstrate the effectiveness of EIs. The results indicated that the EIs helped participants think and analyze products from a broader perspective that takes creativity into account. This also shows potential to increase the pool of judges available making these resource-intensive methods more viable.

Enlarging the pool of judges is of critical importance because researchers who have worked with too few judges to evaluate the creativity of products (Kaufman & Sternberg, 2010) have found that using a low number of judges comes with low inter-rater reliability values. This study reiterated this fact. In this study the alpha value for inter-rater reliability was .75 for the two expert judges. On the other hand, the seventy participants' inter-rater alpha coefficient values were .79 before the creativity workshop and .89 after. The results clearly demonstrated that having more judges comes with higher inter-rater reliability values and thus it follows that EIs can increase the agreement level among non-expert judges.

Here the participants were given the A and V scale in order to discern their beliefs about creativity. The A and V scale was administrated before and after the EIs in order to observe the

EIs' effect on participants' beliefs about creativity. The A and V results showed that the total score of all participants after the EIs increased by 44 points, and the inter-item alpha coefficient increased from .75 to .86. A paired *t*-test was used to investigate this increase, but it did not find this increase as a significant difference ($t(24) = -0.884, p = .38$). Even though this increase was not significant, it still led to an increase in the inter-rater alpha values, at about .10, for judging the essays which requires more research to investigate this potential as well.

A paired *t*-test also investigated the difference between the experts' and the participants' scoring. The statistical analysis showed that there was a significant difference between the experts' and participants' scoring before the EIs ($t(2) = 5.20, p < .05$). However, this significant difference became insignificant after the creativity workshop ($t(2) = 1.77, p = .22$). This is strong evidence that the EIs made the participants' ratings closer in alignment with the experts' ratings and showed that non-expert judges can indeed be trained.

During this study, expectations of creative products were explicitly discussed. During the workshop what is important in creativity was defined according to relevant literature. This direct delivery of information helped to improve participants' general creativity knowledge-base from the viewpoint of experts. The EIs proved that a participant's individual awareness and judgments of creativity could be enhanced to make them better judges of creativity. The participants additionally had the opportunity to apply what they had learned during this process and this application helped them put this knowledge to task for better internalization of the concepts involved. Further research on the EIs and the A and V scale use is needed. It is important to note there was not a control group in this study to observe the EIs' particular effect on the participants' performance in judging creativity like Harrington (1975) and Runco and Okuda (1991) did in their studies. Therefore, a future study should test this in order to see the difference between using EIs after a creativity workshop.

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APPENDIX A- THE ATTITUDES AND VALUES SCALE

Attitudes and Values

Part of the *Runco Creativity Assessment Battery* (rCAB)©2012

Directions: Use the A-E scale (given below) to indicate how much you agree or disagree with a certain statement. You may need to approximate. Please indicate how you really think and behave, not how you would like to. Remember--no names are used. All of your individually identifiable information are confidential.

Again, you may need to approximate. For each item, circle the response option that is THE CLOSEST to being accurate. Here are the options:

1= totally DISAGREE

2 = mostly disagree

3= neutral

4 = mostly agree

5 = totally AGREE

To what degree to you agree with each of the following?

1. Even if some method has worked well in the past, it is a good idea to question and perhaps change it on a regular basis.

(1) Totally Disagree (2) Mostly Disagree (3) Neutral (4) Mostly Agree (5) Totally Agree

2. One of the advantages of developing expertise is that you can make useful assumptions and work more quickly.

(1) Totally Disagree (2) Mostly Disagree (3) Neutral (4) Mostly Agree (5) Totally Agree

3. Time is often wasted when everyone involved in a project shares each of his or her own ideas.

(1) Totally Disagree (2) Mostly Disagree (3) Neutral (4) Mostly Agree (5) Totally Agree

4. Diversity is a good thing to have in an organization that wants to be innovative.

(1) Totally Disagree (2) Mostly Disagree (3) Neutral (4) Mostly Agree (5) Totally Agree

5. When solving problems it is often beneficial to postpone judgment about possible solutions.

(1) Totally Disagree (2) Mostly Disagree (3) Neutral (4) Mostly Agree (5) Totally Agree

6. Maybe it is good for mad scientist to be strange, but for the rest of us its best to go along with the crowd.

(1) Totally Disagree (2) Mostly Disagree (3) Neutral (4) Mostly Agree (5) Totally Agree

7. Solutions and ideas are often improved by considering a variety of perspectives.

(1) Totally Disagree (2) Mostly Disagree (3) Neutral (4) Mostly Agree (5) Totally Agree

8. It isn't enough to just find an original idea. That idea is only worth something if you test it, verify it, implement it.

(1) Totally Disagree (2) Mostly Disagree (3) Neutral (4) Mostly Agree (5) Totally Agree

9. If you produce a large number of ideas, you are likely to find some high quality ideas and solutions.

(1) Totally Disagree (2) Mostly Disagree (3) Neutral (4) Mostly Agree (5) Totally Agree

10. Problem solving and innovation benefit from shifts in perspective.

(1) Totally Disagree (2) Mostly Disagree (3) Neutral (4) Mostly Agree (5) Totally Agree

11. It can be useful to collect data and obtain new information before solving a problem.

(1) Totally Disagree (2) Mostly Disagree (3) Neutral (4) Mostly Agree (5) Totally Agree

12. Any group working and all projects should have a person of authority who constantly insures that no time is wasted exploring every option.

(1) Totally Disagree (2) Mostly Disagree (3) Neutral (4) Mostly Agree (5) Totally Agree

13. It is best to stick with a "tried and true" approach to innovation, once you find something that works.

(1) Totally Disagree (2) Mostly Disagree (3) Neutral (4) Mostly Agree (5) Totally Agree

14. Good insights often result from concentrating on a problem. It is best not to take time off when immersed in a project.

(1) Totally Disagree (2) Mostly Disagree (3) Neutral (4) Mostly Agree (5) Totally Agree

15. Useful ideas can often be found if you change the problem; don't just look for solutions to the problem as it is presented.

(1) Totally Disagree (2) Mostly Disagree (3) Neutral (4) Mostly Agree (5) Totally Agree

16. I look for ways to isolate myself so I can concentrate and think deeply about my work.

(1) Totally Disagree (2) Mostly Disagree (3) Neutral (4) Mostly Agree (5) Totally Agree

17. There is clear benefit to thinking about ideas that other people will not consider.

(1) Totally Disagree (2) Mostly Disagree (3) Neutral (4) Mostly Agree (5) Totally Agree

18. I avoid working outside my area of expertise. I do not want to be a beginner again and again.

(1) Totally Disagree (2) Mostly Disagree (3) Neutral (4) Mostly Agree (5) Totally Agree

19. The important thing at work is to find out what will gain the approval of other people (supervisors, co-workers, clients).

(1) Totally Disagree (2) Mostly Disagree (3) Neutral (4) Mostly Agree (5) Totally Agree

20. It is useful to tolerate people who have different views, even if we are trying to solve a particular problem.

(1) Totally Disagree (2) Mostly Disagree (3) Neutral (4) Mostly Agree (5) Totally Agree

21. It is difficult for me to work with people who have very different backgrounds.

(1) Totally Disagree (2) Mostly Disagree (3) Neutral (4) Mostly Agree (5) Totally Agree

22. Work can be fun if you approach projects playfully, like they are games and have fun.

(1) Totally Disagree (2) Mostly Disagree (3) Neutral (4) Mostly Agree (5) Totally Agree

23. Originality can be very useful at work or in school.

(1) Totally Disagree (2) Mostly Disagree (3) Neutral (4) Mostly Agree (5) Totally Agree

24. Sometimes it is best to be unconventional.

(1) Totally Disagree (2) Mostly Disagree (3) Neutral (4) Mostly Agree (5) Totally Agree

25. I am tolerant of people who are different, bohemian, contrarian, odd.

(1) Totally Disagree (2) Mostly Disagree (3) Neutral (4) Mostly Agree (5) Totally Agree