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The Impact of Human Intervention on Intuitive Creation: Direct and Indirect

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Abstract. Intuition is an inseparable physiological function of human beings. However, the mechanism of its operation and the means for improvement rarely attract people's attention, and people have never mastered the means to scientifically influence intuition. Many creators in film and television have boldly imagined intuition, such as Spider-Man's spider-sense. But in reality, people have never approached the limit of intuition. This article will start with intuition and explore what good and bad effects this wonderful mechanism has on human. In addition, intuition also plays an indispensable and significant role in the creation process. What is the connection between this great ability to change human lives and intuition? Can human artificially influence it? Therefore, the testers selected 17 Chinese undergraduate students with a certain amount of gaming experience. Based on the game fields they were familiar with, they conducted a profound discussion on the impact of artificial indirect and direct intervention on human intuitive creation. The experimental data shows that indirect intervention has a better ability to cultivate creativity, while direct intervention lacks certain growth potential. It is time for people to explore some educational and physiological mysteries that humanity has yet to solve.

Keywords: Intuition, direct and indirect intervention, intuitive creation

1. Introduction

"Intuition is a decision-making method that is used unconsciously by experienced practitioners but is inaccessible to the novice." [1], she pointed out that intuition, as an extremely crucial human function, has demonstrated an effect far beyond our imagination in clinical judgments in medicine. In the contradiction with evidence-based medicine, intuition served as an empirical function that transcended evidence-based judgment, assisting doctors in performing surgeries, and it was later proven that the more experienced the doctor was, the better they could utilize this function. The author in the article highly emphasizes the importance of intuition. It is easy to see that in the relevant narrative of the article, intuition is regarded as a human function that constantly changes along with experience.

Therefore, in order to facilitate readers' understanding of the subsequent concepts, based on some existing literature [2] researcher will define intuition and make a distinction of its concepts. Intuition is a rapid and continuous form of thinking, which does not overly emphasize causal logic and is influenced by tacit knowledge. (Regarding the topic of tacit knowledge, article will provide more

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explanations in the subsequent paragraphs. For now, article will not delve deeper into this issue.) Since intuition has the above functions, it is inevitable to delve deeper into its actual role. What can people do with intuition? Is there a scientific way to modify intuition? Will human intervention strengthen intuition? Can its inherent characteristics of rapidity and coherence be amplified, to obtain a thinking tool that is more efficient than mere thinking? Next, taking thoughts away from simply examining the concept of 'intuition'. Making some intuitive connections. Make a non-verified assumption here, that the above statement is completely correct. Just like the linguist Louis in the movie 'Arrival' who mastered the predictive writing weapons of an alien civilization, intuition can be successfully transformed by us into a trainable advanced thinking. So, as an emperor who holds the power of life and death and can glimpse the future, how would people utilize this advanced thinking?

It is very exciting to have some new and fresh things that offer new perspectives. The ability to create, which can drive both the individual and the world forward, can this ability be linked to intuition? This article will explore this exciting connection in more detail later.

2. Intuitive creation

It is hard to be the first person to make the above association. Some researchers have already conducted relevant studies on the relationship between the two [3]. In the article, they closely examined the relationship between intuition and creativity. They divided creativity into two parts: the stage of idea generation and the stage of idea evaluation. Intuition was further divided into creative intuition and problem-solving intuition. They proposed a thinking framework, and they believed that creative intuition could correspond to the stage of idea generation, while problem-solving intuition would correspond to the stage of idea evaluation. Out of caution, the researchers still considered this framework to be merely at the hypothetical stage because they lacked more rigorous empirical evidence.

Some more avant-garde and innovative studies, such as those conducted by [4] Dollinger et al., employed MBTI for their research and combined some measures of creativity performance to assess the relationship between creativity and intuition. Researchers [5,6] distributed a series of creativity assessment lists to 94 college students. In the test results, participants classified as intuitive and sensory types received high scores, which revealed the significant role that intuition plays in creativity. Researchers believe that these pieces of evidence at least indicate a high degree of correlation between intuition and creation. However, this article is not intended to delve deeply into the underlying corresponding relationship between the two. Instead, it focuses on integrating intuition and creation without further subdividing them. Rather, it explores the more fascinating aspect that is formed by this combination, namely intuitive creation, in a more in-depth manner.

3. Intuitive creation and human intervention

Regarding creativity, in a universal society, creativity can be influenced by natural elements and social factors. Some professional doctors and scholars [7] have employed medical methods to carry out more scientific cultivation of creativity. The current study tested the effects of tDCS over the left AG on two metaphor generation tasks. It compared the stimulation of the anode and cathode electrodes involved in transcranial direct current stimulation, and proved that a higher level of seeking pleasure could stimulate the generation of more sophisticated metaphors, thereby demonstrating the correlation between pleasure and creativity. It also utilized the anode and cathode for artificial control and achieved an impact on creativity by inhibiting the control network. This

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article also pays close attention to how to influence creativity. However, next step will adopt a different approach from that used in medical equipment and other products. Instead, research will conduct a research experiment that focuses more on behavioral characteristics to observe the results.

Inspired by the above literature, research will attempt to design an experiment to explore the impact of intuition creation under different human influences.

4. The idea of the experimental design

4.1. Reference to the thinking process

In some advanced studies conducted by researchers [8], They are dedicated to exploring the impact of cultural and recreational activities on the mental health, social connections, and creativity of college students. For research, it should focus on the certain influence it has on the creativity of college students. The researchers employed a randomized controlled trial method to conduct a ten-week experiment. 76 college students were divided into two groups. Under artificial intervention, the experimenters continuously recorded for ten weeks, and the large amount of data made the experiment more accurate. In terms of the results, cultural and recreational activities significantly improved the mental health, social connections, and creativity of college students. However, there are some imprecise expressions in the article. The evaluators' assessment of creativity only reached the stage of creativity expression. After the experiment, the college students expressed a significant increase in their willingness to express creative ideas to the experimenters, but the evaluators did not judge their expression results. Therefore, researcher believe that merely focusing on the improvement of creativity cannot lead to a definite conclusion.

In order to further clarify and make a decision on my experiment, research began to put effort into the assessment of the results produced. In an article that mentions active creation [9], The researchers hypothesized that empowerment, autonomy, influence, and creativity—measured through the creation experience scale—could serve as mediating factors in the positive relationship between active creation and outcomes such as self-efficacy and happiness. This hypothesis was tested and confirmed through mediation analysis. The findings revealed that the effect of active creation on both self-efficacy and happiness was predominantly transmitted through the dimensions captured by the creation experience scale.

Research believes the method described in this article can be used as a means to evaluate creativity. It allows the creator to engage in creation in a manner similar to the act of creation itself, and then assesses based on the results.

4.2. Experimental background

Based on the above conditions, the purpose of this experiment is to test whether the intuitive creativity of the participants has changed under different artificial intervention conditions, or in other words, whether the participants' own creativity has changed after undergoing artificial intervention. In the study conducted by researchers [10], it was observed that high levels of concentration led to better test performance compared to low concentration, regardless of whether the learning took place through digital or in-person methods. Nonetheless, the in-person teaching approach demonstrated the greatest degree of concentration. These findings indicate that educators should incorporate diverse instructional strategies and leverage their unique functionalities to actively involve students and sustain their attention. From the above experimental phenomena, it is not difficult to discover the influence of interest on the final outcome and the ability to concentrate.

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Therefore, in the following experiments, researcher hope that the experiments conducted by the participants will be carried out in areas that require high interest and certain level of cognition. Due to the uniqueness of the experiment, it differs from most experiments conducted by other researchers where participants are randomly selected from the general population. Researcher have narrowed down the scope of the participants to 17 full-time undergraduate students from Chinese universities. Due to the limitations of my experiment, it is not possible to rent a venue or use professional equipment for the tests. Therefore, all the subsequent experimental data are collected through online communication software for online data collection.

The seventeen Chinese full-time undergraduate students selected share certain commonalities. Researcher need to clarify here that our experimental setting was based on the first-person shooter game APEX legends ("Apex legends" is a free hero shooting game developed by Respawn and published by EA. The game is set in the border world 30 years after "Titanfall 2". Players control distinctive legendary characters and form a three-person team. In modes such as "survival", they collect equipment, utilize skills, and collaborate as a team to defeat other teams and win the game. The game continuously updates season content to maintain its freshness.). Therefore, the selected students were not randomly chosen but were rather experienced e-sports players with 700 to 1500 hours of gaming time.

5. Method

5.1. Literature search

Initially, researcher performed an extensive search across several relevant databases, including PubMed, Google Scholar, and Scopus. The search was conducted using a set of key terms such as creativity, creative capacity, creative assessment, innovation, divergent thinking, and intuition, along with topics related to the development of creativity, human involvement, and approaches to learning. Utilizing these broader concepts allowed me to narrow the focus of the research to more specific aspects within these terms, such as processes of idea generation and methods of evaluating ideas.

5.2. Experiment

In the context of Apex Season 25, research organized 17 college students into two distinct groups: one consisting of nine participants and the other with eight. The group of nine served as the control group, while the group of eight functioned as the experimental group. Initially, research applied an indirect and non-interventional approach to the control group. This group was further divided into subgroups of 2:2:2:2:1, forming teams of three players (as the maximum team size in Apex is three) to engage in ranked matches over a one-hour period. The goal was to explore various team composition combinations by leveraging the diverse set of characters available in the game. Throughout this process, volunteers engaged in verbal discussions focusing on the game's richness and diversity, intentionally avoiding conversations about competitive strength and instead emphasizing diversity.

In contrast, the experimental group followed a 2:2:2:2 structure. They were instructed to adopt the most commonly accepted team compositions recognized as optimal in the current game version. Additionally, researcher actively pointed out perceived flaws in the game, aiming to challenge their existing understanding and perspectives. The intention was to directly influence their thinking and encourage a shift in their approach to the game.

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At the end of each week, all participants were asked to submit one suggestion for improving the current state of the game. These proposals were then rated by ten individuals on a scale from 0 to 10. To encourage creativity and active participation, monetary incentives were provided weekly. The entire experiment spanned three weeks, with weekly records and evaluations conducted to track any changes in creative output over time. In order to achieve the goal of intuitive creation, we will compress the creation time to within five minutes. And research will randomly start the creation at the end of each weekly experiment, so as to eliminate the thinking process and leave more room for the crystallization of instinctive thoughts. (table 1)

Table 1. Experiment

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
week1	3	1	2	0	8	6	10	4	5	6	8	7	7	2	6	3	3
week2	5	7	4	3	7	5	8	6	5	5	4	10	5	6	2	1	3
week3	6	6	7	5	6	8	5	9	4	4	5	7	8	3	4	3	7

The red ones represent the control group, while the black ones are the experimental group. The following three columns are the corresponding recorded scores.

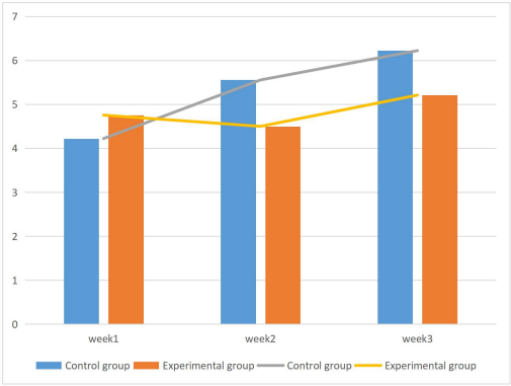


Figure 1. Average score trend

5.3. Results

From the above data, it can gain some reasonable analyses. Compared with direct intervention, indirect intervention shows greater progress in terms of scores. In the first week, the experimental group demonstrated generally higher scores, but in the following two weeks, it did not show sufficient progress in creativity. Although the control group's scores were not high in the first week, there was a very high score, and overall, it showed significant progress in the subsequent period.

5.4. Discussion

During the experiment, while people cannot definitively attribute the observed outcomes to insufficient data, researcher would still like to highlight some intriguing patterns. While playing the game, the control group exhibited noticeably more enthusiastic emotional reactions. In addition, their responses tended to be more imaginative and reflected a broader range of thinking. In contrast, although the adjustments made by the experimental group were generally accurate, the overall mood during the game felt more intense and was primarily centered around competition and the desire to win or avoid losing. It is unclear whether this observation carries significant implications, as

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research currently lack sufficient supporting evidence. Researchers present it here only as a potential interpretation. Based on the data alone, it appears that indirect intervention may be a more effective approach for fostering creativity. This finding may also hint at certain challenges within the current Chinese educational context, though researchers will not explore that aspect further in this discussion.

5.5. Limitations

In this study, there are some obvious limitations that are unavoidable at present. Due to issues such as personnel, financial resources, and time, researcher was unable to find more abundant samples to support my viewpoint. Also, due to the particularity of the experiment, the number of qualified participants was even scarcer. Researcher have always believed that the cultivation of creativity is a long process. The experimental period was only three weeks, and it cannot precisely explain some issues. Similarly, due to individual differences, the impact of each person's gaming duration on the creative outcome, and each person's personality issues, were not fully considered. Regarding the selection of the experimental project, Researcher think it was simply because researcher have been deeply involved in this game for a long time, so researcher believed himself could better precisely evaluate the experimental results. However, for more rigorous scientific reasoning, researcher think himself lack some necessary conditions and restrictions. But conducting the research was also because researcher saw many papers lacking reasonable experimental data, and often could only make deductions based on previous literature. Therefore, researcher designed a not-perfect small experiment.

6. Conclusion

This paper examined how human intervention—both direct and indirect—shapes intuitive creation across artistic, cognitive, and technological contexts. By integrating empirical findings and theoretical perspectives, the study highlights that intuitive creativity is neither purely spontaneous nor entirely controllable; rather, it emerges from a dynamic interplay between individual cognition, environmental cues, and structured guidance.

Direct intervention, characterized by explicit instruction, feedback, and constraints, can accelerate skill acquisition and enhance the reliability of intuitive judgments by providing clear frameworks for pattern internalization. However, excessive direct control risks suppressing originality, narrowing exploratory behaviors, and weakening the autonomy of creative intuition. In contrast, indirect intervention operates through subtler mechanisms—such as environmental design, implicit priming, and exposure to diverse stimuli—that shape intuition without overtly restricting it. Indirect approaches tend to better support the flexibility and openness needed for high-level creative insights, though they may produce more heterogeneous and less predictable outcomes.

Overall, the findings suggest that optimal intuitive creation arises not from minimizing intervention but from balancing structure and freedom. Effective creative ecosystems often blend direct and indirect influences, enabling individuals to internalize stable cognitive patterns while maintaining the fluidity necessary for novel idea generation. Future research would benefit from exploring context-sensitive models of intervention, examining how individual differences—such as expertise, motivation, and cultural background—moderate the interaction between intervention type and intuitive performance. As human–machine collaboration grows increasingly prevalent, understanding the nuanced role of intervention in shaping intuition will be essential for fostering responsible, innovative, and adaptive forms of creative work.

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