**The connection between the game of Sokoban plus counting and the ability to remember and creativity in psychology**

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I found inspiration from several papers that I studied during the semester, and in what follows, I will correspond the design elements in the game to the inspiration I found in this semester's papers.

First let me introduce the game, it is a basic demo model derived from the Sokoban gameplay, in many places are not perfect, I can only show the core gameplay and concept.

The player operates the villain to push the boxes on the map, and the boxes actually have their own properties, such as equals or numbers, and the player combines the numbers and f symbols to reach a valid equation. Pass the game. In fact, in this game, due to the limitation of arrays, only addition, subtraction, multiplication, and division are within 10, which is due to the disadvantage of Char arrays, which can only store one digit because it calculates numbers by computing ASCII.

Making Things Hard on Yourself, But in a Good Way: Creating Desirable Difficulties to Enhance Learning (Elizabeth Ligon Bjork and Robert A. Bjork). In this paper the author told that “**Introducing Desirable Difficulties to Enhance Learning**”. In this game, the equations are not in the form already arranged in the book, but need to be combined by yourself. And, in the game, the initial value of box will be 1, and the player needs to memorize it, and the value of box is not visible in the subsequent calculations, and the player needs to memorize it by himself. The memory can be improved by setting reasonable obstacles.” **Spacing Study or Practice Sessions**” In some textbooks or exercise books, there is always a pattern in the appearance of mathematical equations, such as one page is full of addition problems, and the next page is full of subtraction problems. I want to learn math in a different way. So the levels are set up with a lot of flexibility, and players can organize their own equations to achieve the desired results. And this process is carried out at intervals.

In other paper names ‘Test-Enhanced Learning Taking Memory Tests Improves Long-Term Retention’(Henry L. Roediger, III, and Jeffrey D. Karpicke) The authors tell us that the test will enhance one's long-term memory. So this game will be a level system to achieve the effect of testing, and the process of testing is unlimited, which will greatly reduce the frustration caused by the failure of the player. For example, in the last level, 1+1=2, then in the next level, you can set the goal to three, which requires players to think and get experience from the previous level to pass the game.

“The concept of flow in collaborative game-based learning” (Wilfried Admiraal , Jantina Huizenga , Sanne Akkerman , Geert ten Dam). In this paper, I know the flow is a zone, a comfort zone between the difficulty of the level and the increase of the player's level. So in the game, the reasonable layout of the game level will be very important, because if the difficulty is too large will make beginners feel too difficult and can not play the game, and the difficulty is set too simple will make players lose the sense of challenge and feel the game is boring. Applying Flow to the game will be an important step in enhancing the gaming experience.

‘Inhibitory Control as a Core Process of Creative Problem Solving and Idea Generation from Childhood to Adulthood’(Simone M. Ritter and Ap Dijksterhuis).

In this game, different obstacles and hurdles are set up to force the player to think in order to break through his creativity. In this article, it is mentioned that people always rely on inertia to do things, that is, empiricism. In the game, by setting the levels reasonably, it can make players think of other ways to pass the game instead of inertial thinking to stimulate players' creativity on calculation to achieve flexible calculation.