Intelligence Enhancement is Possible by Seven Effective Thinking Patterns (SETP) Tool

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Abstract:
Intelligence enhancement has always remained the challenge for scientists and psychologists. Various tools have been proposed and tested. In latest researches by the Seven Effective Thinking Patterns (SETP) tool designed and developed by Dr. Arvinder Singh is tested for intelligence enhancement. The sample comprises of 75 adults randomly selected from colleges, entrepreneur and corporate employees. The selected parameters for evaluation were: 1. Number of Ideas 2. Quality of Ideas 3. Positive Factors of the situation (Pros) 4. Negative factors of the situation (cons). Pre and Post training scores were evaluated on a scale of 1 to 10.

Number of ideas during pre-training situation was 4.13±1.236 while for Post-training situation it was 7.32±1.312. with increase of 77.2%. The score on quality of ideas of pre-training was 3.96±1.130 and for post-training it was 7.94±1.437 registering increment 99.99%. The Positive Factors of the situation (Pros) score during pre-training was 4.20±0.987 and post-training 6.98±1.271 with increase 66.2%. The score on Negative factors of the Situation (Cons) during pre-training was 4.84±0.896 and for post-training situation it was 8.05±1.129 with increase of 66.3%. It is concluded that SETP tool is quite effective in improving intelligence of participant on Guilford Model of Intelligence.

Key Words: Seven Effective Thinking Patterns, SETP, Creativity, Intelligence Enhancement, Guilford Intelligence Model.

Introduction:
Intelligence is the most valuable asset of humanity and it is the basis for evolution of human race. Since ages scientists are trying to decode the language of brain and mechanism of mind to learn the things as fast as possible. Researchers have clearly shown that intelligence and intellect is a complex function of brain. There are plenty of factors which operate together for anatomy of intelligence. The most accepted model for intelligence is the Guildford model of intellect. This model has got 150 parameters of intellect. The model consists of three components: 1. Contents 2. Products 3. Operations. In this model obviously the contents and products are more or less uncontrollable but operations can be trained by various mechanisms. To review the operations part of Guildford intelligence theory is made up of five components as follows:

1. Evaluation
2. Divergent Production
3. Convergent Production
4. Memory
5. Cognition

SETP tool designed, developed and patented by Dr Arvinder Singh has got different components of training different faculties of mind namely problem-solving, decision-making, creativity and memory. It is well accepted that these components can be objectively trained and once these factors are trained automatically intellectual ability of the person increases manifolds. The Seven Effective Thinking Patterns are:

1. Metacognitive Thinking Pattern
2. Objective Thinking Pattern
3. Constructive Thinking Pattern
4. Critical Thinking Pattern
5. Creative Thinking Pattern
6. Emotive Thinking Pattern
7. Radiant Thinking Pattern

The “SETP” teaches how to use these patterns and customize sequential order of employing the thinking pattern depending on the varying situation.

Review of Literature:

Charles Spearman (1904) mentioned that all branches of intellectual activity have in common one fundamental function, whereas the remaining or specific elements of the activity seem in every case to be wholly different from that in all the others. David Wechsler (1944) suggested that the aggregate or global capacity of the individual to act purposefully, to think rationally, and to deal effectively with his environment. Lloyd Humphreys (1979) was of opinion that the resultant of the process of acquiring, storing in memory, retrieving, combining, comparing, and using in new contexts information and conceptual skills. Reuven Feuerstein (1990) expressed that the theory of Structural Cognitive Modifiability describes intelligence as "the unique propensity of human beings to change or modify the structure of their cognitive functioning to adapt to the changing demands of a life situation.

Howard Gardner (1993) said that to my mind, a human intellectual competence must entail a set of skills of problem solving — enabling the individual to resolve genuine problems or difficulties that he or she encounters and, when appropriate, to create an effective product — and must also entail the potential for finding or creating problems — and thereby laying the groundwork for the acquisition of new knowledge.

Material and Methods:
The sample comprises of 75 adults randomly selected from colleges, entrepreneur and corporate employees. The age of sample ranges between 19 to 42 years and were 49 Males and 26 Females. They were all of different socio-economic status and were having secondary education as minimum qualification. They were evaluated on the basis of analysis of the situation "Petrol prices are doubled". They were asked to write as many analytical factors as they can in given 10 minutes. The second parameter to be judged was number of ideas generation for the use of hairpin. Subjects were given 20 minutes to write the ideas. The answer sheets were labelled by unique number. Then subjects were trained by SETP tool. After training program they were asked to generate and relate analysis and ideas on the same topic and the answer sheets were labelled again by unique number.

Two independent evaluators on prescribed parameters evaluated answer sheets and given scores of both were averaged. The evaluators were kept blind about any tool applied and were not told that they are evaluating the same student twice. In short evaluators evaluated 150 copies unaware of SETP tool application. The selected parameters for evaluation were:

I. Number of Ideas
II. Quality of Ideas
III. Positive Factors of the situation (Pros)
IV. Negative factors of the situation (cons)

The evaluation was done on a scale of 1 to 10. Results were analyzed by the Paired 't' test was used for comparing pre and post training scores. All the calculations were done through Microsoft Excel.
Results:
Table below showing Comparison of scores of the four factors before and after training by Seven Effective Thinking Patterns (SETP) tool

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>N</th>
<th>Std. Deviation</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Ideas</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pre-training</td>
<td>4.13</td>
<td>75</td>
<td>1.236</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Post-training</td>
<td>7.32</td>
<td>75</td>
<td>1.312</td>
<td></td>
</tr>
<tr>
<td>Quality of Ideas</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pre-training</td>
<td>3.96</td>
<td>75</td>
<td>1.130</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Post-training</td>
<td>7.94</td>
<td>75</td>
<td>1.437</td>
<td></td>
</tr>
<tr>
<td>Positive Factors of the situation (Pros)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pre-training</td>
<td>4.20</td>
<td>75</td>
<td>0.987</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Post-training</td>
<td>6.98</td>
<td>75</td>
<td>1.271</td>
<td></td>
</tr>
<tr>
<td>Negative factors of the situation (cons)</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Pre-training</td>
<td>4.84</td>
<td>75</td>
<td>0.896</td>
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</tr>
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<td>Post-training</td>
<td>8.05</td>
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<td>1.129</td>
<td></td>
</tr>
</tbody>
</table>

Chart
Discussion:

The above table shows the mean and standard score on number of ideas during pre-training situation was 4.13±1.236 while for Post-training situation it was 7.32±1.312. which is significant at P value less than 0.01. Percentage increase from pretraining to post training is 77.2%. It infers that there is significant difference between Pre and Post-training scores. Furthermore the mean scores reflect that there is significantly positive impact of SETP training in increasing number of ideas.

The above table visualizes the mean and standard score on quality of ideas during pre-training situation was 3.96±1.130 while for Post-training situation it was 7.94±1.437. The mean difference was found to be 3.960 and P value is significant at less than 0.01 levels. Percentage increase from pretraining to post training is 99.9%. It proves that there is significant difference between pre and Post-training scores. Furthermore the mean scores reveal that there is significantly positive impact of SETP training in quality of ideas.

The above table indicates the mean and standard score on analysis of Positive Factors of the situation (Pros) during pre-training situation was 4.20±0.987 while for Post-training situation it was 6.98±1.271. P value is significant at less than 0.01 levels. Percentage increase from pretraining to post training is 66.2%. It results that there is significant difference between Pre and Post-training scores. Furthermore the mean scores supports that there is significantly positive impact of SETP training in increasing analysis of Positive Factors of the situation (Pros).

The above table denotes the mean and standard score on Negative factors of the Situation (Cons) during pre-training situation was 4.84±0.896 while for Post-training situation it was 8.05±1.129. P value is significant at less than 0.01 levels. Percentage increase from pretraining to post training is 66.3%. It signifies that there is significant difference between Pre and Post-training scores. Furthermore the mean scores deduce that there is significantly positive impact of SETP training in increasing analytical Negative factors of the Situation (Cons).

Conclusion:

Intelligence is the most powerful asset for achieving long-term success not only in financial terms but also enriching the life. Various tools have come into the picture for enhancement of intelligence. SETP tool looks quite promising in the sense that it is having an objective criteria plotted and linked with Guilford structure of intelligence. By the parameters examined in this test obviously the operational part of intelligence namely evaluation and diverging thinking is trained with proper measuring scale. On various parameters listed in this study the improvement shown is more than 60% and for few students it was more than 90%. So it can be concluded with confidence that a SETP tool is very effective for training of intellect in different parameters. As it is common saying that practice is mother of any skill similarly that tool and techniques of seven effective thinking patterns (SETP) have to be practised.

References: