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Research Article

PERCEIVED NEED OF GOOGLITE ICLASS PROGRAMME- A MULTIPLE INTELLIGENCE CLASSROOM IN MODERN WORLD EDUCATION

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ABSTRACT

Googlite i class programme is an innovative iclass programme. It is a multiple intelligence classroom based training program for from 11-15 years of age. It enhances the overall character and the personality of the child leading him grooming and flourishing at his own pace towards success. The in hand research study was designed to enhance the learning process, cognitive abilities and personality ofthe students. The study was conducted on 235 subjects aging between 11 and 15 years, in Chandigarh, Mohali and Panchkula. The subjects were assessed, after which they were provided specialized training as per the Googlite iclass programme. It was witnessed that learning among children can improve drastically if they areprovided required training as per their learning style. An extremely significant drift towards higher level of Cognitive Abilities was recorded after the completion of Googlite iclass Programme.

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INTRODUCTION

The Googlite iclass programme includes Brain Yog, how things are made, Innovative Brain, Memory Development, Modern GK, Personality Development and Vedic Math. It is a multiple intelligence, classroom based, training programme for 11-15 years of age. This 104-hour unique programme is specifically framed for weekend sessions; 2 hours/session, stretching it for a year. It enriches the personality of the child; bringing forth his inner self, hence enabling him to pave his way to success in a lucid manner. The child's overall development is ensured.

Brain Yog

It signifies the restriction of the wheels of consciousness and paths of ecstatic self-transcendence or methodical transmutation of consciousness to the point of liberation from the spell of ego, a part of one's personality. Yog has multiple physical, mental and spiritual benefits and holds that the influence of the mind on body is far more powerful than the influence of body on mind. According to a study conducted in a secondary school, preliminary results suggest that yog has the potential of playing a protective or preventive role in maintaining mental health. There is scientific evidence that yogic practices enhance mental health and flexibility. Meditational practices reduce stress and improve academic performance, increases alertness and bring improvement in competitive performance (Sharma, 2002), which generally improved the quality of life (Dua 1998; DhananjayGunde, 1988). The present study reveals the effect of yog on the academic performance of college students in relation with stress. The present study was conducted to find the effect of yog on the academic performance, with relation to stress, on the Science and Art departments. The practice of yog synchronizes human physiology through controlled postures, breathing, meditation, a set of regular physical exercises and relaxations. Yog practice improves autonomic nervous system by modulating parasympathetic and sympathetic activity, significant changes in brain rhythms, sensory motor rhythm, regulation of breathing rate, improvement in the cardiac activity and enhances the sense of well-being. Yog practices have an immense impact on the performance of the central nervous system and improves their attention, concentration and other cognitive faculties. Regular practice of yog has benefits in the improvement of the body, mind, and spirit, guiding to a healthier and more fulfilling life. The practice of yog can increase grey matter volumes in temporal and frontal lobes, producing positive impacts on mental health and improved cognitive functions. Study also suggested that yog practice could also bring improvement in tasks which are related to selective attention, concentration, visual processing capacity and enhancement in motor activity. The practice of yoga resulted in an improved eye-hand coordination, reversal skills, speed, accuracy and enhanced cognitive processes. Practicing of *Pranayama, asanas*, and meditation results in improved

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verbal skills, improvement in hand-eye coordination and improved neural performances. It is believed that the practice of yoga can also result in changes in perception, attention and cognition. Investigations have shown the beneficial effects of yoga on cognition, such as increased performances on visual and verbal memory and improved memory scores.

Vedic Math

Vedic mathematics was not known to the world but with an increase of interest in ancient Sanskrit text, the ancient vedic mathematics was rediscovered by Swami Bharatikrisnatirthaji (the former Shankaracharya of Puri, India) in 1911. He was a great scholar of Sanskrit, mathematics, history and philosophy. His deep study and careful research had deciphered the great mathematical formulas known as *SUTRAS* that were completely ignored as no one could relate these to mathematics. Vedic mathematics (1965) that is a pioneer work of Bharatikrishnatirthaji, is considered as a first work towards it. Certainly, there are many advantages of learning the subject, students develop problem solving ability and it also leads to the development of creative intelligence. Students of vedic mathematics can not only do simple calculations of subtraction, addition, multiplication but also very complex calculations such as algebra, geometry, calculus and trigonometry. Your mind is at work with this mathematics, so mental sharpness is associated with it. Vedic math is very effective and at the same time is easy to learn. Only 16 vedic sutras are used to solve mathematical problems. They are basically word formulae that describe normal way of solving mathematical problems. Instead of learning by repetition, vedic mathematics involves logic and understanding the fundamental concepts. One can do calculations much faster than done by using the conventional method that is taught in schools. It teaches the students to solve same problem in different ways. Vedic Mathematics is one of the most natural ways of working and can be learnt with very little effort and that also within a very short span. It is also supported by a set of checking procedures for independent crosschecking that we do. As mentioned earlier, it is the element of flexibility that continues to add to the very essence of Vedic Mathematics. The calculation techniques provided are highly creative as well as effective.

The core idea focused on Vedic Mathematics is that mathematical calculations can be carried out easily and of course mentally. Vedic Mathematics continues to be the centre of attention and researches span across the globe. Researches are being carried out in multiple areas that include the effect of use of Vedic Mathematics in modern times. Easy applications of the sutra are being propounded by theorists that can help students solve problems related to Calculus and Geometry. In modern times, many students are resorting to the use of Vedic Math, especially the ones who sought to appear for competitive exams. The sutras help in solving a lot of complicated problems easily. Vedic mathematics offer students the extra edge that general mathematics might not be able to provide them with. Such is the versatility of Vedic Mathematics; even scientists from NASA have applied certain principles of Vedic Mathematics in the realm of artificial intelligence. These days, Vedic Mathematics is being taught at school level and special attention is being provided to students those who want to learn more about the subject.

Innovative Brain

Becoming innovative involves destroying the old ways of thinking personally and professionally, training the brain to summon its muse and therefore find the pathway to innovative thinking. Andrew S. Grove, the co-founder of Intel, put it well in 2005 when he told an interviewer from 'Fortune', "When everybody knows that something is so, it means that nobody knows nothing'." In other words, it becomes nearly impossible to look beyond what you know and think outside the box you've built around yourself.

Personality Development

Sigmund Freud is considered one of the foremost theorists of personality development. He developed his theories through case histories through which he observed that human psychological development is a process involving what he referred to as tensions (or polarities) between the need for attachment and relatedness, on the one hand, individuation and self-definition (Blatt, 2006). The impact of Freud's work on modern ideas about mind, sexuality, and morality is vast but controversial. Although his work has been enormously influential in the development of clinical psychotherapy and psychoanalytic theory, his approach has been subject to intense criticism in relation to its assumptions about gender and his emphasis on the significance of mothers in personality development. Personality is the collection of characteristic thoughts, feelings, and behaviors that are associated with a person. Personality Development is an improvement in all spheres of an individual's life, be it with friends, in the office or in any other environment. The progress in and insistence on quality of education coupled with rapid strides in spread of knowledge calls for equally developed and able recipients. Thus, a definite need is felt for well-developed personality and character in our life. The Vedantic concept of personality development is based on the concept of perfection of each soul and self-confidence for realization and manifestation of this inner knowledge. Child-psychologists and adult personality researchers study individual differences, but historically the two groups have done so within different research traditions. Child-psychologists have focused on temperament traits, the behavioral consistencies that appear early in life, that are frequently but not exclusively emotional in nature and that have a presumed biological basis (Shiner 1998). Researchers studying adults have focused on personality traits, which encompass a broader range of individual differences in thinking, feeling and behaving. The last decade has been a vibrant, productive period in the study of the links between early temperament and later personality (Graziano 2003). From the point of view of this emerging developmental science of personality, childhood temperament should be conceptualized with an eye toward adult personality structure and adult personality should be understood in light of its childhood antecedents.

Memory Development: Clark and Paivio, (1991) proposed a dual-code theory of memory that hypothesizes that information is retained in long-term memory in two forms: visual and verbal (corresponding to episodic and semantic memory, respectively). Their theory predicts that information represented both visually and verbally is recalled better than information represented only one way (e.g. you remember a face better if

you also know a name, and you remember a name better if you can connect it to a face). Bransford *et al.,* (1982) noted that memory does not depend on depth of processing alone but also on the way in which information is learned and then tested. Their transfer-appropriate-processing theory holds that the strength and durability of memory depend not only on the depth of processing but also on the similarity between the conditions under which the material was learned and those under which it is called for. This distinction helps to explain why so many students can recall and apply rules of grammar and punctuation on a multiple-choice or fill-in-the-blank test (a format similar to that in which they learned these skills) but are unable to recall or apply the same skills in their own writing.

Modern GK: General knowledge in modern world is an important component of crystallized intelligence and is strongly associated with general intelligence, and with openness to experience. Studies have found that children who are highly knowledgeable in a particular domain tend to be knowledgeable in many. General knowledge is thought to be supported by long-term semantic memory ability. A number of studies have found that males tend to have greater general knowledge than females, perhaps due to gender differences in interests rather than memory ability. Recent studies have found that general knowledge is associated with exam performance in schoolchildren and proofreading skills. General knowledge makes starting conversations easy. Holding a conversation with a friend, colleague, acquaintance or even a stranger may be difficult if you don't share common interests. General knowledge and current affairs are instant conversation starters and can help in those typical awkward moments of silence. Being up-to-date on general knowledge will save children from weird situations when neither you nor someone else have anything to say. The child's boundaries of conversation will extend much beyond your core areas on interests. This will allow him to start conversations with virtually anyone and everyone. It aids to get better grades in school. Whether it is a long and dull school essay or your prep for an upcoming debate, general knowledge can help to enhance academic knowledge. The child will be able to stand out from the crowd if your knowledge on just about everything within and beyond his course work is 'tip-top'. The importance of general knowledge percolates deeper than just being able to be a good conversationalist.

Strong command over general knowledge and current affairs will help children to get rid of the fear of public speaking as he will no longer be worried about filling the long pauses and gaps. Academic curriculum may not be enough to increasing creativity and innovation in children. Everyone learns the same things in school and college. What makes people different from each other is the extra knowledge they have.

How Thing are made: Children wonder how things are made - products like jeans, candles, cheese, pillow, fire extinguisher, light bulb, mirror ,etc. that a child uses in his everyday life. Children get to know the manufacturing processes. This is an initiative for kids showing how various items are made. It covers 24 different products and manufacturing processes. We encourage learning by doing, wherever feasible.

MATERIALS AND METHODS

The sample was randomly selected from Chandigarh, Mohali and Panchkula. Cognalysis (tool) was used for Testing Cognitive abilities. Cognalysis was administered as per the standard criteria. Test-1 results were analyzed. Following this, subjects were flourished with the iclass programme. The programme includes Brain Yog, Cartooning and Animation, General Knowledge, Speed Math, Linguistic Activities, Manners and Etiquettes, Memory Development and Origami. It is a training program for 11-15 years of age. The classes were imparted for 104 hours at week end sessions; 2 hours/session, stretching it for a year. Test-2 was conducted after the iclass completion, and the results were compared.

Assessment Test-1
Googlite iclass programmefor 104 hours at week end sessions; 2 hours/session, stretching it for a year
Assessment Test-2

Fig. 1. Methodology

Statistical analysis

Once the data was obtained, it was coded, tabulated and analyzed, keeping in mind the objectives of the study. Appropriate statistical tools were used to draw meaningful inferences. The statistical tools used in the present study are given in the table below;

Table 1. Statistical tools used for analysis of data

S.No.	Statistical tools	Formula	Purpose
1.	Mean (x)	X = ΣX/N where, X = Variable N = No. of sample	To find out the average scores of variable used in the study.
2	Standard Deviation (S.D.)	0 = ✓Σ x / N Where X = Deviation from actual mean X = mean. X = variable. N = number of samples.	To find out deviation from the mean scores of the variables.
3.	Standard error of mean (S.E)	S.E = 0/n Where 0 = S.D. n= number of observations	To find out the degree to which the mean is affected by the error of measurement and sampling.
4.	't' test	t = (x1-x2) / S ✓n1n2/n1 + n2 where x1 = mean of 1st sample x2 = mean of second sample S = combine S.D. n1 = number of observations in 1st sample. n2 = number of observations in 2nd sample	To compare the average score of any two groups or to find out whether the mean of the two samples vary significantly from each other.

Table 2. No of Subjects as per IQ Range in Test-1 and Test-2

IQ	Below 60	60-70	70-89	90-111	111-120	120-150	150-180	180+
Test 1	51	45	69	61	5	4		
Test 2	2	18	41	95	20	37	20	2

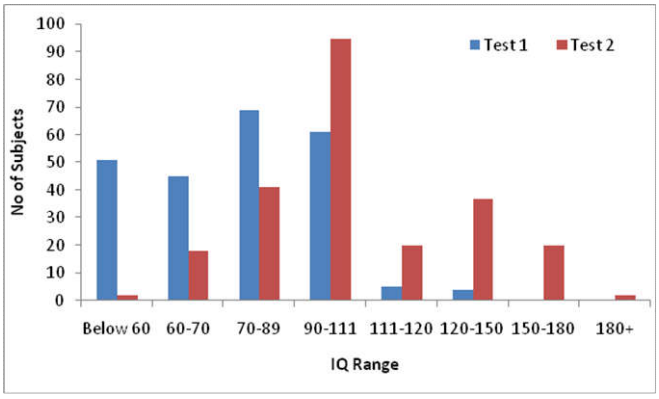

Fig. 2. No of Subjects as per IQ Range in Test-1 and Test-2

Table 3. No of Subjects as per Focus Factor Range in Test-1 and Test-2

Focus Factor	Below 30	31-50	51-75	76-90	91-120	121-150	150+
Test 1	24	89	101	20	1	0	0
Test 2	8	4	136	67	15	4	1

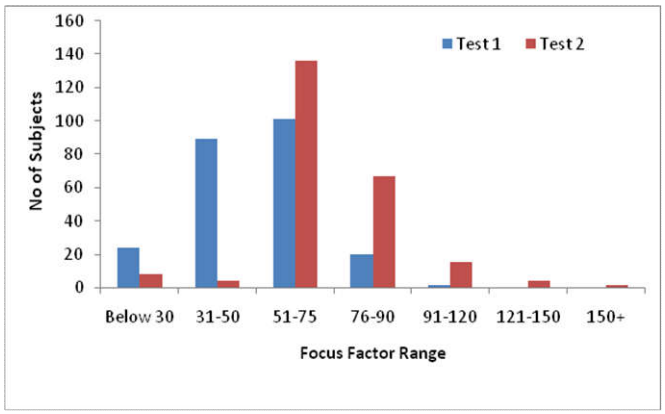

Fig. 3. No of Subjects as per Focus Factor Range in Test-1 and Test-2

Table 4. No of Subjects as per DMA Range in Test-1 and Test-2

DMA	Below 0.35	0.36-0.5	0.51-0.65	0.66-0.80	0.81-1.0	1.1-1.4	1.5-1.7	1.7 +
Test 1	134	71	15	10	5	0	0	0
Test 2	17	98	96	5	9	7	3	0

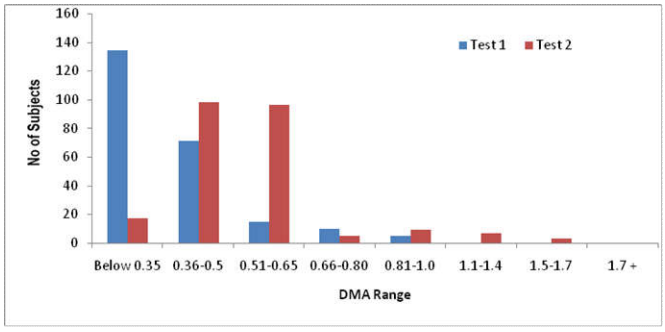

Fig. 4. No of Subjects as per DMA Range in Test-1 and Test-2

Table 5. No of Subjects as per CQ Range in Test-1 and Test-2

CQ	Below0.2	0.2-0.3	0.31-0.4	0.41-0.6	0.61-0.7	0.71-0.8	0.81-0.9	Above 0.9
Test 1	51	118	24	19	18	5	0	0
Test 2		17	94	39	40	24	16	5

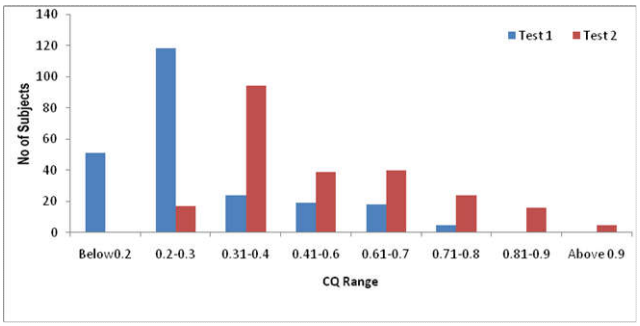

Fig. 5. No of Subjects as per CQ Range in Test-1 and Test-2

Table 6. No of Subjects with IQ, FF, DMA & CQ > Desired Level in Test-1 & Test-2

Desired Level	Test 1	Test 2
IQ	4	59
Focus Factor	1	20
DMA	5	19
CQ	23	85

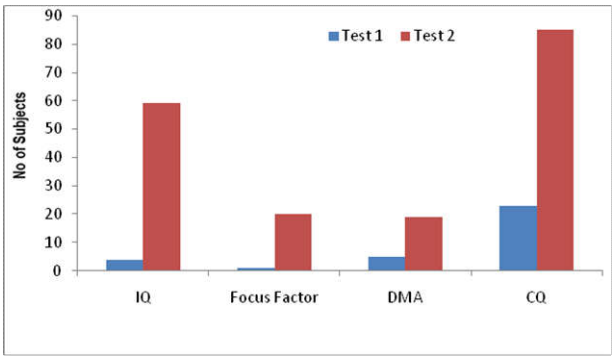

Fig. 6. No of Subjects with IQ, FF, DMA & CQ >Desired Level in Test-1 & Test-2

Table 7: Mean, Standard deviation, standard error, t-values and level of Significance of IQ of subjects between Test 1 and Test 2

Test	Mean	SD	SEM	t- value	p-value	Level of Significance
Test-1	81	16.5	1.07	25.2602	<0.0001	Extremely Statistically Significant
Test-2	114	11.35	0.74			

Table 8: Mean, Standard deviation, standard error, t-values and level of Significance of FF of subjects between Test 1 and Test 2

Test	Mean	SD	SEM	t- value	p-value	Level of Significance
Test-1	51	14	0.913	18.3588	<0.0001	Extremely Statistically Significant
Test-2	71.36	9.64	0.62			

Table 9: Mean, Standard deviation, standard error, t-values and level of Significance of DMA of subjects between Test 1 and Test 2

Test	Mean	SD	SEM	t- value	p-value	Level of Significance
Test-1	0.34	0.25	0.016	13.8179	<0.0001	Extremely Statistically Significant
Test-2	0.61	0.165	0.01			

Table 10: Mean, Standard deviation, standard error, t-values and level of Significance of CQ of subjects between Test 1 and Test 2

Test	Mean	SD	SEM	t- value	p-value	Level of Significance
Test-1	0.29	0.18	0.011	17.186	<0.000	Extremely Statistically Significant
Test-2	0.56	0.16	0.014	4	1	

RESULTS AND DISCUSSION

Intelligence Quotient of subjects was found to be significantly higher in Test-2 as compared to their IQ in Test-1. A dramatic surge was noticed in the IQ after the successful completion of the said Programme. Focus Factor of subjects was found to be significantly higher in Test-2 as compared to that in Test-1 after attending Googlite iclass programme. Decision Making Ability of subjects was found to be significantly higher in Test-2 as compared to that in Test-1 after attending Googlite iclass programme. There was noticed a huge surge in the Creative Quotient of subjects after attending Googlite iclass programme. After the successful completion of the Googlite iclass programme for a year, the number of subjects acquiring at least the desired range of IQ, FF, DMA and CQ inclined sharply.

Conclusion

There was found a significant soar in the mean IQ, FF, DMA and CQ of the subjects after the completion of the programme. Learning process, cognitive abilities and personality of the students can improve drastically if they are provided required training as per their learning style. An extremely significant drift towards higher level of Cognitive Abilities was recorded after the completion of iclass Programme-A Unique Classroom based on Cognitive Science Education Technology. Learning process of students depend on their cognitive abilities. We can measure the cognitive abilities of students with the help of cognitive ability tests. The current level of development can be measured and reordered to achieve the desired levels. To do this, we need to assess their individual learning style and gifted ability so that we can design a task based time bound customized training solution for them. There are 2 types of factors that can help design success and enhance the learning process in students. These factors are further categorized as artificial factors and natural factors. By artificial factors we mean those core cognitive ability factors which can be reordered when identified at anearly stage. Natural factors are those factors that have astrong influence in this process like gifted ability, learning style and the scale of multiple intelligences. When education is delivered keeping in mind the learning style of a student and the curriculum is customized around the gifted ability, it is possible to reorder the core cognitive ability factors.

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