

Analyzing Impact of Customized Education Based on Gardener’s Multiple Intelligences on Cognitive Abilities of Students in Dasmesh Public School, Faridkot

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Abstract: *The present research plan was meant to analyze the impact of customized education based on Gardener’s Multiple Intelligences on Cognitive Abilities of students in Dasmesh Public School, Faridkot. These cognitive abilities precisely included Intelligence Quotient, Focus Factor, Decision making ability and Creative Quotient. In depth study was conducted on a randomly selected sample of 192 students of the school. Initially, Assessment (Test-1) was administered on subjects to assess their cognitive abilities following which 90 days of customized training was given to the subjects. This customized training was based specifically on Gardener’s Multiple Intelligences theory. Later, tracker test (Test-2) was conducted on subjects and finally the data were analyzed. The results notified significant soar in IQ, FF, DMA and CQ of the participants.*

Keywords: *Intelligence Quotient Focus Factor Decision Making Ability Creative Quotient Dasmesh Public School, Faridkot*

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I. INTRODUCTION

Dasmesh Public School is founded on the principle of “Respect” where we strive to nurture intrinsically motivated, collaborative learners who listen, question, challenge and probe the world around them. They are taught to take ownership of their learning that aids them in becoming responsible, global citizens. We aim at creating an educational environment which motivates all students to enhance their abilities, interests and talents to the fullest. The mission of the school is to provide a qualitatively superior learning environment that grooms fervor for intellectual curiosity, independence and innovation, encourages risk taking and is committed to a legacy of academic excellence and social responsibility. The school focuses on academics with appropriate co-curricular experiences in-tandem, which develops academically brilliant students well equipped with life skills to navigate the world successfully. A true Dasmeshian will always endeavour to do his / her country proud. Good Education is something that nurtures the innate abilities of a child. It ensures that the child grows aesthetically, mentally, physically, socially and emotionally. Good education should foster creativity, sensitivity, compassion and care. It is a value - based asset that leads to growth of socially responsible, environmentally conscious and innovative human beings. Education is not just a passport to good life, but a potent and prominent institution used to empower a process that enables children to develop holistically. The mission of our schools is to make education a relevant, meaningful and interesting activity so that our students are ready to face the challenges of the world.

It widely accepted that the learning process is instrumental in shaping one’s personality and the way he/she deals with situations of life. The shift of thoughts from bookish knowledge to knowledge of life, in schools, has brought forth a sea of change. People have warmed up to the idea of education being the key to a well-rounded development instead of just a mean to acquire degrees and monetary success in life. Education must facilitate the cultivation of a healthy thought process and groom our cognitive abilities. In the present competitive world, education is a basic necessity for human beings after food, clothes and shelter. School education must focus on various aspects which contribute immensely to the development of the young minds as they step into adulthood. Education plays a vital role in shaping tomorrows’ leaders. Not only can we become a better nation by acquiring the skills necessary to be productive members of a civilized society. Increase knowledge to actively achieve and meet challenges that can produce changes in which are productive for attaining business innovations, political and economic objectives. Our world is constantly changing and it requires a society that is well versed in understanding the problems deriving from culture differences and tolerance of one another’s beliefs and perceptions. We are dealing with systemic problems in education, economic, government, religion and culture differences. The multiple intelligences theory was originally proposed by psychologist Howard Gardner at Harvard University in 1983. He defined eight measures of

multiple intelligence: linguistics, logical- mathematics, visual-spatial, interpersonal, intrapersonal, musical, bodily-kinesthetic and naturalist. (Armstrong, 2007; Gardner, 1983). Human abilities and potentials are direct evidence that multiple intelligences exist, and these intelligences can be fully utilized either individually or combined. The theory can be applied to any part of school and family, providing teaching methods more room for creativity, emphasizing comprehension and applying new knowledge, techniques and concepts to the teaching process. (Abdulaziz, 2008; Ulinwa, 2008). Therefore, the first research motivation was to increase teaching effectiveness through the incorporation of multiple intelligences teaching into a commercial design course. In addition, multiple intelligences could not only provide teachers with more choices in teaching and assessment methods, but also allow students to demonstrate what they have learned in many different ways. Another research motivation, then, is to use multiple intelligences teaching as a means for college students to explore their intelligence strengths. Since the diverse style of learning proposed by multiple intelligences theory can expose the strengths and weaknesses of students, it helps the instructors understand each student better and provide specific support where necessary. The third research motivation is to assist students in excelling in their areas of strength and to study the learning difference. (Yang, 2008). According to multiple intelligences theory, schools should employ various approaches to observe students' problem-solving skills and accomplishments long-term. They should also assess the students' current level from different angles. Therefore, this research seeks to use the multiple intelligences theory on a color theory course, centering the study on the students' learning interest in the hope of increasing learning effectiveness. This was research motivation four (Armstrong, 2000; Bailey, 2008). While additional research is still needed to determine the best measures for assessing and supporting a range of intelligences in schools, the theory has provided opportunities to broaden definitions of intelligence. As an educator, it is useful to think about the different ways that information can be presented.

II. METHODOLOGY

The first step included sample selection and then, rapport was formed with the subjects. The subjects were tested twice and monitored for 3 months.

STAGES OF STUDY

- Stage-1 At initial stage, Test-1 was conducted.
- Stage-2 In the second Stage, 90 days of customized training was provided to the subjects.
- Stage-3 Third Stage included monthly monitoring.
- Stage-4 Tracker test (Test-2) was conducted on subjects.
- Stage-5 Analysis of data.



Fig 1: Design of the Research work

PARTICIPANTS

Table 1: Details of the participants

S.No	UID	Name	Age (Y)	Grade
1	1741	Chirag	14	8-B
2	1742	Skilove	14	8-B
3	1743	Gursewak	13	8-B
4	1744	Rajandeep	14	8-B
5	1745	Jasnoor	13	8-B
S.No	UID	Name	Age (Y)	Grade
6	1746	Kulreet	13	8-B
7	1747	Manav	13	8-B
8	1748	Riya	13	8-B
9	1749	Avtar	14	8-B
10	1750	Ajay preet	14	8-B
S.No	UID	Name	Age (Y)	Grade
11	1751	Dheerain	13	8-B
12	1752	Rajvir	13	8-B
13	1753	Tushar	14	8-B

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14	1754	Pratham	13	8-B
15	1755	Ravneet	13	8-B
16	1756	Amarpartap	14	8-B
17	1757	Bakul	13	8-B
18	1758	Gurleen Singh	14	8-B
19	1760	Dilpreet	14	8-B
20	1761	Sharuti	13	8-B
21	1762	Rimaljit	13	8-B
22	1763	Yashanpreet	11	8-B
23	1764	Jatin	14	8-B
24	1765	Ojasvi	13	8-B
25	1766	Prabhsimran	13	8-B
26	1767	Kunal	15	8-B
27	1768	Chhavi	13	8-B
28	1769	Arjun	13	8-B
29	1770	GurleenKaur	13	8-B
30	1771	Arush	13	8-B
31	1772	Dilshad	14	8-B
32	1773	Deepika	14	8-B
33	1774	GaganParkash	14	8-B
34	1775	Ekamdeep	13	8-B
35	1776	Navreet	14	8-B
36	1777	Harshit	13	8-B
37	1778	Arham	13	8-B
38	1779	Amrinder	13	8-B
39	1780	Anmoldeep	13	8-B
40	1781	Shikha	13	8-B
41	1782	Ashutosh	14	8-C
42	1783	Anureet	13	8-C
43	1784	Harkirat	13	8-C
44	1785	Madhav	13	8-C
45	1786	SahilNarula	14	8-C
46	1787	Khusham	14	8-C
47	1788	Jasmeen	13	8-C
48	1789	Gurjinder	15	8-C
49	1790	Nikita	13	8-C
50	1791	Simerpreet	13	8-C
51	1792	Simranjit	13	8-C
52	1793	Prabhjot	14	8-C
53	1794	Simranjeet	14	8-C
54	1795	Lora	14	8-C
55	1796	Seerat	13	8-C
56	1797	Simranpreet	14	8-C
57	1798	Harkamal	14	8-C
58	1799	Harsimrat	13	8-C
59	1800	Deepak	14	8-C
60	1801	Sharnveer	13	8-C
61	1802	Anamica	13	8-C
62	1803	Arvind	14	8-C
63	1804	Sheikh Anmol	13	8-C
64	1805	Ashmeen	14	8-C
65	1806	Gagandeep	14	8-C
66	1807	Ravinder	15	8-C
67	1808	Amardeep	14	8-C
68	1810	Ashu	14	8-C
69	1811	Maheshinder	14	8-C
70	1813	Jagtar	13	8-C
71	1814	Mandeep Singh	13	8-C
72	1815	Manpreet Singh	14	8-C
73	1816	Kapish	13	8-C
74	1817	Sharon	13	8-C
75	1818	Ajay Veer	14	8-C
76	1819	Pawandeep	13	8-C
77	1820	Simranjot	13	8-C
78	1821	Harleen	13	8-C
79	1822	Ajayveer	14	8-C
S.No	UID	Name	Age (Y)	Grade
80	1823	Anikait	14	8-C
81	1824	Dhairya	13	8-C
82	1825	Lovish	14	8-D

83	1826	Sukhmandeep	14	8-D
84	1827	Piyush	13	8-D
85	1828	Bhuvan	13	8-D
86	1829	Tushar	14	8-D
87	1830	Karan Beer	14	8-D
88	1831	GaganpreetKaur	13	8-D
89	1832	Harshpreet	13	8-D
90	1833	Amitoj	13	8-D
91	1834	Aditya	13	8-D
92	1835	Sunpreet	13	8-D
93	1836	Kirandeep	14	8-D
94	1837	Gursahil	14	8-D
95	1838	Sahildeep	13	8-D
96	1839	Money	13	8-D
97	1840	Navsumeet	13	8-D
98	1841	Prabhjot	13	8-D
99	1842	Jasmine	15	8-D
100	1843	Himani	14	8-D
101	1844	Sargun	13	8-D
102	1845	Shrinath	14	8-D
103	1846	AnmolPreet	13	8-D
104	1847	Saloni	13	8-D
105	1849	Tarun	14	8-D
106	1850	Dipinderjeet	13	8-D
107	1851	Kashish	14	8-D
108	1853	Harsukhman	14	8-D
109	1854	Manpreet	13	8-D
110	1855	Simranpreet	13	8-D
111	1856	Gursimer	14	8-D
112	1857	Lovepreet	14	8-D
113	1858	Khushpreet	13	8-D
114	1859	Davneek	13	8-D
115	1860	Arshdeep Singh	14	8-D
116	1862	Rajinder	14	8-D
117	1863	Harwinder	14	8-D
118	1864	Bhoomi	13	8-D
119	1865	Chandni	13	8-D
120	1867	Shivraj	15	9-B
121	1868	Inayat	14	9-A
122	1869	Amitoj Singh	14	9-A
123	1870	Harsimrat	14	9-A
124	1871	Abay Pal	16	9-B
125	1872	Robindeep	15	9-B
126	1873	Armaanpreet	15	9-B
127	1874	Yuvraj	15	9-B
128	1875	Japneet	14	9-B
129	1876	Gurmubarak	14	9-B
130	1878	Navneet	15	9-B
131	1879	Khushi	14	9-B
132	1880	Ajit	15	9-B
133	1881	Jashanpreet	15	9-B
S.No	UID	Name	Age (Y)	Grade
134	1882	Arshdeep	15	9-B
135	1883	SahilNarula	15	9-B

136	1884	Anmolpreet	14	9-B
137	1885	Priyanka Mehta	15	9-B
138	1886	Paraspreet	16	9-B
139	1887	Prabhnoor	14	9-B
140	1888	Raghav	13	9-B
141	1889	Vishal	13	9-B
142	1890	Prabhjot Singh	14	9-B
143	1891	Dilkaran	15	9-B
144	1892	Rajat	14	9-B
145	1893	Kajal	14	9-D
146	1894	Arshdeep Singh	16	9-C
147	1895	KaranbeerSandhu	15	9-C
148	1896	Karanbir	14	9-C
149	1897	Rajminder	15	9-C
150	1898	HarsimranPreet	14	9-C
151	1899	Lovepreet	15	9-C
152	1900	Prabhkanwal	15	9-C
153	1901	Jaskaran	14	9-C
154	1902	Tejkarambir	14	9-C
155	1903	Rantej	14	9-C
156	1904	Ramandeep	15	9-C
157	1905	Schajpreet	14	9-C
158	1906	Manjinder	16	9-C
159	1907	NavrozNaman	14	9-C
160	1908	Arshdeep Singh	14	9-C
161	1909	Pardeep	16	9-C
162	1910	Mandeep	16	9-C
163	1911	Arshdeep S	15	9-C
S.No	UID	Name	Age (Y)	Grade
164	1912	Jasmeet	16	9-C

165	1913	Samanshu	14	9-C
166	1914	Akash	15	9-C
167	1915	Alisha	15	9-C
168	1916	Anjali	14	9-C
169	1917	Harman	15	9-C
170	1918	Harteshwar	16	9-C
171	1919	Ayush	15	9-C
172	1920	Tushar	15	9-D
173	1921	Gurkarandeep	15	9-D
174	1922	Saurav	15	9-D
175	1923	AnmolPreet Singh	15	9-D
176	1924	Gurparkash	15	9-D
177	1925	Karsimar	15	9-D
178	1926	AngadBir	15	9-D
179	1927	Vikramjeet	16	9-D
180	1928	Harsimran	14	9-D
181	1929	Prince	15	9-D
182	1931	Priyanka	15	9-D
183	1932	Kanishka	15	9-D
184	1933	Armaandeep Singh	15	9-D
185	1934	Mandeep	15	9-D
186	1935	Harjodh	14	9-D
187	1936	Neha	14	9-D
188	1937	Akshat	14	9-D
189	1938	Jashanveer	15	9-D
190	1939	Akashdeep	16	9-D
191	1940	Ramandeep Singh	16	9-D
192	1967	Muskan	13	8-B

III. RESULT AND DISCUSSION

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.

Table 2: Range of Dynamic Intelligence Quotient among respondents in Test-1 and Test-2

IQ	60-70	70-89	89-111	111-120	120-150	150-180	Above 180	total
test 1	2	11	93	47	39	0	0	192
test 2	2	5	75	46	64	0	0	192

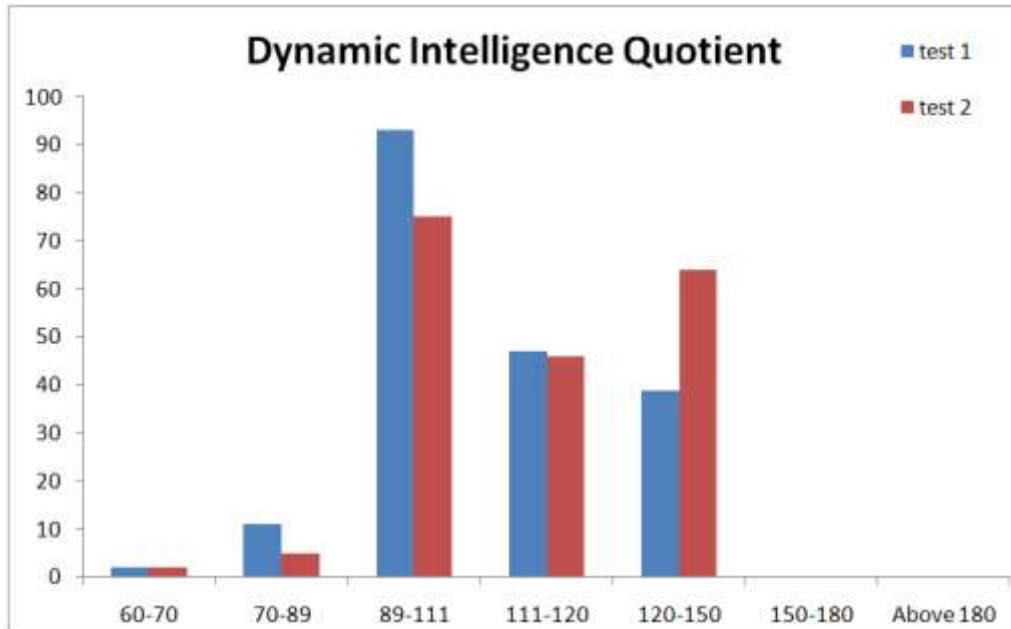


Fig2: Range of Dynamic Intelligence Quotient among respondents in Test-1 and Test-2

It was notified that after the consummation of customised solutions, a greater proportion of respondents were scanned for higher levels of intelligence whereas it was witnessed that the number fell for those having lower IQ.

Table 3: Range of Focus Factor among respondents in Test-1 and Test-2

FF	Below 30	30-50	50-75	75-90	90-120	120-150	150+	total
test 1	0	2	97	62	28	2	1	192
test 2	0	1	45	81	61	3	1	192

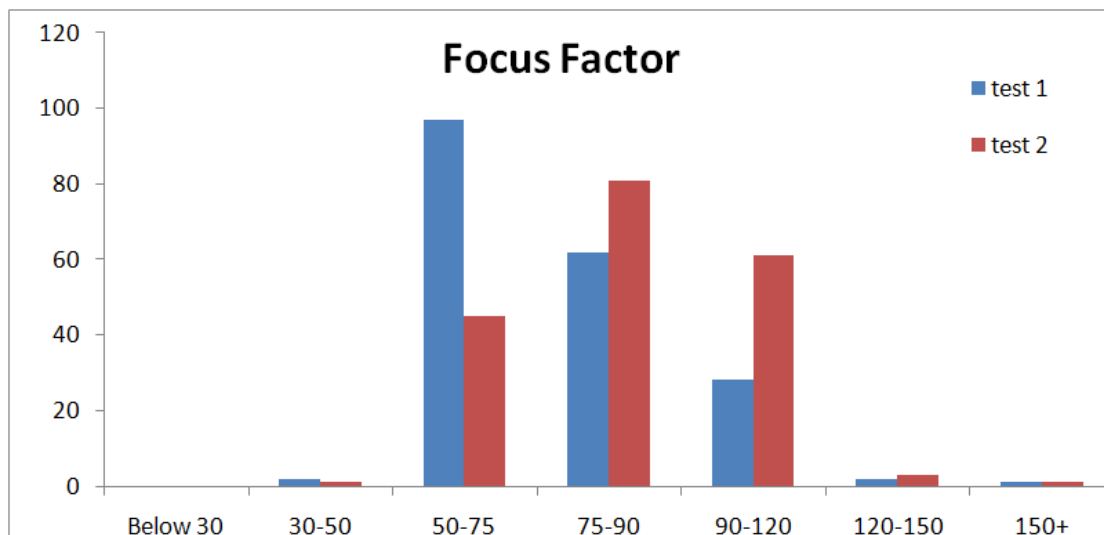


Fig 3: Range of Focus Factor among respondents in Test-1 and Test-2

It was noticed that more respondents had obtained for higher levels of focus factor whereas it was observed that the number fell for those having lower focus.

Table 4: Range of Decision Making Ability among respondents in Test-1 and Test-2

DMA	Below 0.35	0.35-0.50	0.50-0.65	0.65-0.80	0.80-1.0	1-1.4	1.4-1.7	1.7+	total
test 1	6	116	59	8	3	0	0	0	192
test 2	0	1	69	101	18	3	0	0	192

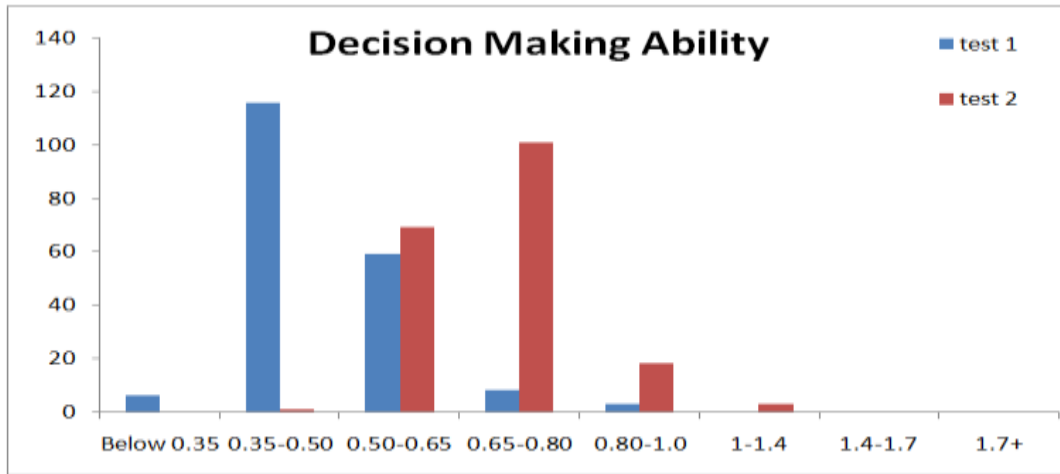


Fig 4: Range of Decision Making Ability among respondents in Test-1 and Test-2. Similarly, in case of Decision making ability a significant drift was recorded towards higher edge.

Table 5: Range of Creative Quotient among respondents in Test-1 and Test-2

CQ	Below 0.2	0.2-0.3	0.3-0.4	0.4-0.6	0.6-0.7	0.7-0.8	0.8-0.9	Above 9	total
test 1	0	0	125	54	10	3	0	0	192
test 2	0	0	125	54	10	3	0	0	192

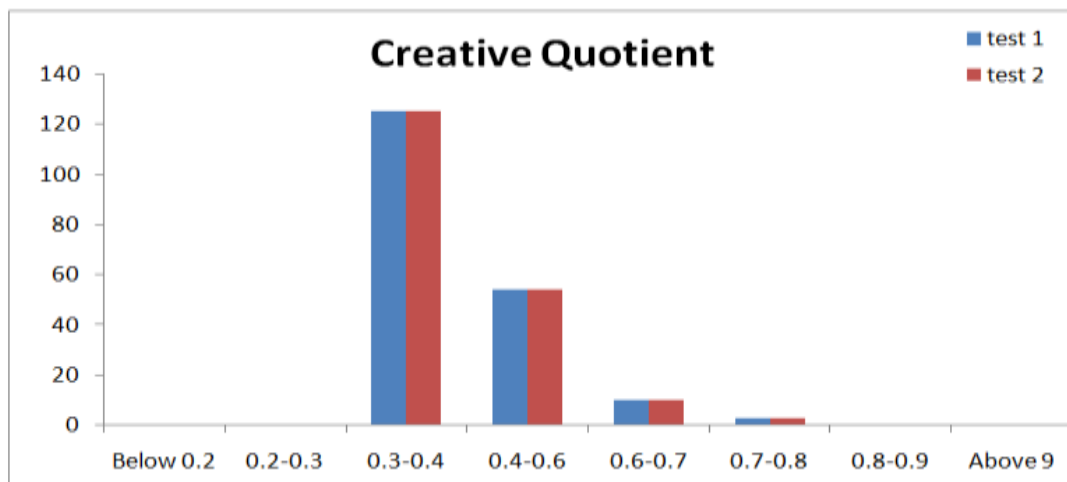


Fig 5: Range of Creative Quotient among respondents in Test-1 and Test-2

Likewise, significantly higher number of students were found to have surged Creative Quotient as compared to those with lower CQ.

Table 6: Percentage of respondents with at least desired values in Test-1 and Test-2

Desired Values	No of students		Percentage	
	Test1	Test2	Test1	Test2
Desired IQ	86	110	45 %	57 %
Desired Focus	93	146	48 %	76 %
Desired DMA	11	122	6 %	64 %
Desired CQ	13	13	7 %	7 %
Total	63	126	33 %	66 %

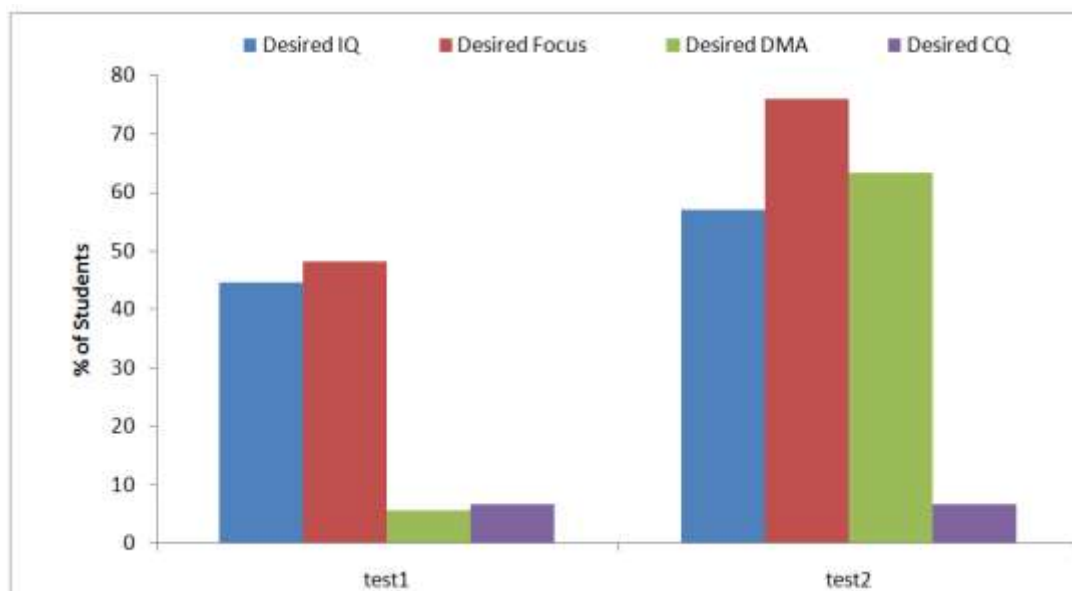


Fig 6: Percentage of respondents with at least desired values in Test-1 and Test-2

IV. CONCLUSION

Through the results, it can be inferred that if education is imparted through the individualistic style and pattern specifically pertaining to the multiple intelligence levels as defined by Gardner, it can lead to surge in cognitive abilities of students. There are certain cognitive ability factors that can be inferred as super sets for complex cognitive functions which can then be reordered by applying customized education methodology. In the present research study, an extremely significant drift towards higher level of Cognitive Abilities was noticed after the completion of 90 days of customized training solution. It was notified that there had been a phenomenal surge IQ, FF and DMA.

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