MULTIPLE INTELLIGENCE OF PROSPECTIVE TEACHERS

Research Paper

ABSTRACT

The purpose of this study was to explore the level of multiple intelligence of prospective teachers of Tamil optional and find out the differences, if any, in terms of gender, locality of colleges and nature of colleges in their multiple intelligence. Forty prospective teachers of Tamil optional were selected randomly from different colleges located in rural and urban areas of Madurai District of Tamilnadu state. The t-test and ANOVA test were used for analyzing the data. The results revealed the existence of significant difference between female and male prospective teachers in their verbal-linguistic and logical-mathematical intelligences. Further, there was a significant difference between rural and urban prospective teachers in their verbal-linguistic, logical-mathematical, visual-spatial and bodily-kinesthetic intelligences whereas there was no significant difference among prospective teachers of men, women and co-education colleges of education.

INTRODUCTION

Education is the process of refining and empowering a personality; it provides the learner the necessary knowledge, forms the attitude and develops the needed skill for survival. In formal education, along with content and students, the role of the teacher is considered by the society to be significant. The teacher can orient the younger generation in a way that is expected by the society. Hence there is an urgent need for overhauling the structure of teacher education and focus on the products, namely the prospective teachers. The ability of the teacher in terms of interaction, communication, creative thinking and moral behaviour is always evaluated by the stake holders. Therefore a number of questions are raised regarding the prospective teachers: Are they really equipped well with regard to their abilities for teaching-learning? What are they specialized at? What are their values? Will they be able to identify the potentials of the adolescents and help them move towards higher achievements? We need today more and more teachers who could serve as social agents and human engineers. A lot of research has been undertaken to study the various aspects of intelligence, skills, personality traits, competence and psycho-social characters. There have been studies on emotional intelligence and multiple intelligence done in the recent past which reveal that prospective teachers need to improve their skills and multiple intelligence.

Bornholm and Datsuro, (2001), Jacqueline Esther Rani (2011) and Adrian(2002) have found out that men have a higher level of multiple intelligence than women and children have. Anthoniyae Nabris (2010) and Schallers (2006) have through their studies revealed that there was a relationship between emotions and multiple intelligence, multiple intelligence and leadership and behavior and multiple intelligence. Ramin Akbari (2008) has found out the relationship between multiple intelligence and learning styles.

NEED AND SIGNIFICANCE OF THE STUDY

Each one is unique and one learns in one's own way according to one's abilities. Unfortunately today's educational system assumes that everyone can learn the same materials in the same way; further the individual differences are not recognized. Traditional understanding points out that people are born with a uniform cognitive ability that can be easily measured by short-answer tests,

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calculated as IQ. At this juncture Howard Gardner initially introduced the concept of multiple intelligence (MI); according to him Intelligence is the potential for finding or creating solutions for problems, which involves gathering new knowledge. Gardner claimed that there are nine intelligences which rarely operate independently. They are used at the same time and tend to complement each other as people develop skills or solve problems. People have a unique blend of intelligences (Howard Gardner 1983).

Considering the educational practices of our traditional society, multiple intelligence provides an alternative for better planning and execution of the teaching-learning process. Multiple Intelligence approves the existence of individual differences and allows the teacher to design different classroom climates. In fact it has met with a strongly positive response from many educators. It has been embraced by a range of educational theorists and, significantly, applied by teachers, schools and policymakers to the problems of schooling. A number of schools have tried to structure curricula and to design classrooms according to the intelligences. Several kinds of intelligence would allow several ways to teach, rather than one. The powerful constraints that exist in the mind can be mobilized to introduce a particular concept (or whole system of thinking) in a way that children are most likely to learn it and least likely to distort it (Howard Gardner, 1993). As each person has a different intellectual composition, we can improve education by addressing the multiple intelligences of our students. A study of MI will help the teachers understand the levels of the multiple abilities and strengths of their students; accordingly they could adopt different approaches and methods for effective teaching-learning process. Teachers understand how students are intelligent as well as how intelligent they are. Knowing which students have the potential for strong interpersonal intelligence, for example, will help teachers create opportunities where the strength can be fostered in others.

Therefore it is imperative that the prospective teachers become aware of the concept of MI. In this study an effort has been taken to study the knowledge of MI of prospective teachers, so that the future teachers are helped to know about the levels of various intelligences which would eventually assist them in their management of students.

OBJECTIVES

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This study has the major objective of finding out the difference among the prospective teachers in their verbal-linguistic intelligence, logical-mathematical intelligence, visual-spatial intelligence, bodily-kinesthetic intelligence, musical-rhythmic intelligence, inter-personal intelligence, intra-personal intelligence and naturalist intelligence in terms of gender, locality and nature of colleges of education.

HYPOTHESES

1. There is no significant difference between male and female prospective teachers in their verbal-linguistic intelligence, logical-mathematical intelligence, visual-spatial intelligence, bodily-kinesthetic intelligence, musical-rhythmic intelligence, inter-personal intelligence, intra-personal intelligence and naturalist intelligence.
2. There is no significant difference between urban and rural prospective teachers in their verbal-linguistic intelligence, logical-mathematical intelligence, visual-spatial intelligence, bodily-kinesthetic intelligence, musical-rhythmic intelligence, inter-personal intelligence, intra personal intelligence and naturalist intelligence.
3. There is no significant difference among prospective teachers of men, women and co education colleges of education in their verbal linguistic intelligence, logical-mathematical intelligence, visual-spatial intelligence, bodily kinesthetic intelligence, musical-rhythmic intelligence, inter-personal intelligence, intra-personal intelligence and naturalist intelligence.

METHODOLOGY

The survey method was followed for this investigation. Since it is a fact finding expedition, this method was adopted by the investigator.

POPULATION

The population for this study was formed from prospective teachers who had chosen Tamil as optional subject in various colleges of education at Madurai District.

SAMPLE

The sample selected for this study consisted of 40 prospective teachers of Tamil optional, studying in different colleges of education, located at Madurai district, Tamilnadu. Here random sampling method was followed. Among forty prospective teachers, there were 19 men and 21 women and there were 21 from rural and 19 from urban locations.

TOOL USED

The investigator adapted the multiple intelligences inventory prepared by Terry Armstrong (2007).

STATISTICAL TECHNIQUE

For analyzing the data, statistical techniques like t test and analysis of variance (ANOVA) were used.

ANALYSIS

The analysis is given in the following tables.

Null Hypothesis 1

There is no significant difference between male and female prospective teachers in their Multiple Intelligence and its dimensions.

Table 1

DIFFERENCE BETWEEN MALE AND FEMALE PROSPECTIVE TEACHERS IN THEIR MULTIPLE INTELLIGENCE AND ITS DIMENSIONS

S. No	Multiple Intelligence	Male (N=19)		Female (N=21)		Calculated value of 't'	Remark at 5% level
		Mean	S.D	Mean	S.D		
1	Verbal-Linguistic Intelligence	45.79	6.99	52.1	11.48	2.12	S
2	Logical-Mathematical Intelligence	46.24	11.6	52.59	7.35	2.05	S
3	Visual-Spatial Intelligence	48.32	10.8	53.14	9.29	1.5	NS
4	Bodily-Kinesthetic Intelligence	50	7.72	50.56	11.75	0.18	NS
5	Musical-Rhythmic Intelligence	51.12	8.58	49.23	11.13	0.6	NS
6	Inter-Personal Intelligence	50.95	8.04	49.14	11.16	0.58	NS
7	Intra-Personal Intelligence	47.49	7.28	51.59	11.5	1.33	NS
8	Naturalist Intelligence	48.77	9.64	48.89	12.4	0.03	NS

(At 5% level of significance the table value of 't' is 1.96)

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It is inferred from the above table that there is no significant difference between male and female prospective teachers in their visual-spatial intelligence, bodily-kinesthetic intelligence, musical-rhythmic intelligence, inter-personal intelligence, intra-personal intelligence and naturalist intelligence, but there is significant difference between male and female of prospective teachers in their verbal-linguistic intelligence and logical-mathematical intelligence

Null Hypothesis 2

There is no significant difference between urban and rural prospective teachers in their Multiple Intelligence and its dimensions.

Table 2

DIFFERENCE BETWEEN URBAN AND RURAL PROSPECTIVE TEACHERS IN THEIR MULTIPLE INTELLIGENCE AND ITS DIMENSIONS

S. No	Multiple Intelligence	Urban (N=21)		Rural (N=19)		Calculated value of 't'	Remark at 5% level
		Mean	S.D	Mean	S.D		
1	Verbal-Linguistic Intelligence	45.33	6.79	53.26	11.45	2.63	S
2	Logical-Mathematical Intelligence	46.46	8.4	53.01	10.68	2.14	S
3	Visual-Spatial Intelligence	48	11.54	54	7.63	1.96	S
4	Bodily-Kinesthetic Intelligence	47.3	11.02	53.6	7.5	2.13	S
5	Musical-Rhythmic Intelligence	48.87	10.72	51.51	9.04	0.85	NS
6	Inter-Personal Intelligence	50.1	10.27	49.89	9.37	0.06	NS
7	Intra-Personal Intelligence	48.1	9.4	51.35	10.27	1.04	NS
8	Naturalist Intelligence	49.68	10.32	47.89	11.98	0.5	NS

(At 5% level of significance the table value of 't' is 1.96)

It is inferred from the above table that there is no significant difference between urban and rural prospective teachers in their musical-rhythmic intelligence, inter-personal intelligence, intra-personal intelligence and naturalist intelligence but there is significant difference between urban and rural prospective teachers in their

verbal-linguistic intelligence, logical-mathematical intelligence, visual-spatial intelligence, and bodily-kinesthetic intelligence

Null Hypothesis 3

There is no significant difference among prospective teachers of men, women and co-education colleges of education in their Multiple Intelligence and its dimensions.

Table 3

DIFFERENCE AMONG MEN, WOMEN AND CO-EDUCATION COLLEGE PROSPECTIVE TEACHERS IN THEIR MULTIPLE INTELLIGENCES AND ITS DIMENSIONS

S. No	Multiple intelligence	Source of variation	Sum of squares	Degrees of freedom	Variance estimate	Calculated 'F' value	Remark at 5% level
1	Verbal-Linguistic Intelligence	Between	778.61	2.00	389.3	4.6	S
		Within	3132.99	37.00	84.67		
2	Logical-Mathematical Intelligence	Between	567.07	2.00	283.54	3.16	NS
		Within	3323.54	37.00	89.82		
3	Visual-Spatial Intelligence Musical-	Between	119.91	2.00	59.95	0.56	NS
		Within	3951.19	37.00	106.79		
4	Bodily-Kinesthetic Intelligence	Between	21.56	2.00	10.78	0.1	NS
		Within	3816.71	37.00	103.15		
5	Musical-Rhythmic	Between	116.41	2.00	58.2	0.58	NS
		Within	3720.46	37.00	100.55		
6	Inter-Personal Intelligence	Between	231.04	2.00	115.52	1.24	NS
		Within	3456.96	37.00	93.43		
7	Intra-Personal Intelligence	Between	190.73	2.00	95.36	0.99	NS
		Within	3578.13	37.00	96.71		
8	Naturalist Intelligence	Between	162.06	2.00	81.03	0.65	NS
		Within	4583.49	37.00	123.88		

(At 5% level of significance, the table value of 'F' is 3.26)

It is inferred from the above table that there is no significant difference among prospective teachers of men, women and co-education colleges of education in their logical-mathematical intelligence, visual-spatial intelligence, bodily-kinesthetic intelligence, musical-rhythmic intelligence, inter-personal intelligence, intra-personal intelligence and naturalistic intelligence but there is significant difference among prospective teachers of men, women and co-education colleges of education in their verbal-linguistic intelligence.

INTERPRETATION

The female prospective teachers are better than male prospective teachers in their verbal-linguistic intelligence and logical-mathematical intelligence. This may be due to in-born quality of thirst for learning and wisdom, commonly seen among women; they excel in their studies and they have the patience to think slowly and act in a systematic manner. This also goes along with the nature of the women.

The rural prospective teachers are better than urban teachers in their verbal-linguistic intelligence, logical-mathematical intelligence, visual-spatial intelligence, and bodily-kinesthetic intelligence. This could be attributed to the culture and habits of the village people; the rural people have a tendency to work hard, spend their time in thinking about the future so that they are able to cultivate on time a better crop and exploit their physical fitness for the same. Also the rural people pay importance to local arts and crafts which would enhance their visual intelligence.

The prospective teachers of co-education colleges of education are better than prospective teachers of men and women colleges of education in their verbal-linguistic intelligence. The co education colleges offer more opportunities for interaction and creative work through organized programmes; there is wider scope for matured relationship in the co-education colleges and hence they are good in verbal-linguistic intelligence.

CONCLUSION

The training in multiple intelligence is the need of the hour as it opens a new horizon for a meaningful and creative teaching-learning process. There must be a workshop for the prospective teachers during their pre-teacher service followed by close monitoring of the methods implemented by them on being appointed teachers in the schools. It must be demanded that the teacher can exhibit a new method of teaching based on multiple intelligence every year and his increment in pay should be linked to his hard work. During the in-service programme, more interactive events connected with ICT usage and group participation are to be organized so that the teachers could network among themselves for future collaboration in their subjects. Multiple intelligence is of vital importance to prospective teachers as it teaches the

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