Study of Vocational Guidance Need in Relation to Mechanical Reasoning and Discipline of Higher Secondary School Students of Indore District

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(ABSTRACT)

The objective of study was-(1) To study the influence of Mechanical Reasoning (MR), Discipline and their interaction on Vocational Guidance Needs of the students. The hypothesis of study was (1) There is no significant influence of Mechanical Reasoning (MR), Discipline and their interaction on Vocational Guidance Needs of the students. The study was Survey in nature. Total 500 students from six higher secondary school of Indore city were selected randomly in the study. Differential Aptitude Test Battery developed by J.M. Ojha (1975) was used for assessment of Mechanical Reasoning of the students. Vocational Guidance Needs Scale (VGNS) was developed and standardized by the researcher. The reliability coefficient of VGNS was 0.87. The Content validity of VGNS was also ensured. The data was analyzed with the help of 2x2 Analysis of Variance (ANOVA). The findings of the study were-(1) The students of high and low MR group were found to have Vocational Guidance Needs to same extent. (2) Science group students were found to have more Vocational Guidance Needs as compared to Arts group students. (3) The Science groups students of high MR have more Vocational Guidance Needs as compared to low HV students group but in Arts group low MR group of students have more Vocational Guidance Needs as compared to high MR group of students.

Key Words : Vocational Guidance Needs, Mechanical Reasoning & Discipline

Introduction

Vocational guidance means helping people to choose work in which they will be reasonably contented, and successful within the limits of their abilities. More ambitiously, it involves the idea of guidance towards a career which will be completely absorbing, to a life that will be fulfilled by work-in short, a vocation. In both, vocational happiness requires that a person's interest, aptitudes and personality be suitable for his work. The root of aptitude is apt, which is a world in itself having such meaning as inclined, lively and quick to learn. Aptitude is the ability to profit readily from instruction, training or experience in a defined area of performance. According to Warren Aptitude is defined as a condition or set of characteristic regarded as symptomatic of an

individuals' ability to acquire with training some specified knowledge, skills or set of responses such as the ability to speak language, to produce music etc. Mechanical Reasoning is ability to understand the basic mechanical principles of machinery, tools and motion and the laws of everyday physics

Review of Related Literature

Related to Vocational Guidance Need and Aptitude related aspect some researches have been conducted by Agrawal (1973), Bhattachrya (1986) & Malini (1995).

Sample

The present study was survey in nature. For the purpose of survey the sample was drawn from the randomly selected six schools of Indore district. There were three Government schools namely, Ahilya Aashram Government Higher Secondary School, Government Higher Secondary School Sanyogitaganj & Swami Vivekanand Government Higher Secondary School and three private schools namely, Anniee Besent Higher Secondary School, Alpine Higher Secondary Public School & New City Convent Higher Secondary School. For study purpose 500 students from these schools were selected. Out of these 500 students, 250 were female and 250 were male student of Indore district. Number of male students belonging government school was 125 and male students belonging private school was 125. Number of female students belonging government school was 125 and female students belonging private school was 125.

Tools

Two tools were used for data collection. To assess students aptitude, 'Differential Aptitude Test Battery' developed by J.M. Ojha (1975) was used. This battery measures aptitude under eight tests namely-verbal reasoning, abstract reasoning, space relation, numerical ability, clerical speed & accuracy, mechanical reasoning, language usage-I and language usage-II. Mechanical Reasoning Test was used in this study. The reliability coefficient obtained are 0.90 for all test except for the mechanical reasoning, space relation and verbal reasoning tests, which is 0.75, 0.70 and 0.81 respectively by split half method. Predictive validity was found. 'Vocational Guidance Needs Scale' (VGNS) was developed and standardized by researcher. This was five point scale with 50 items. The reliability coefficient of Scale was 0.87. Content validity was ensured.

Statistical Technique

The data was analyzed with the help of 2x2 Analysis of Variance (ANOVA).

Result and Interpretation

The objective of study was to study the influence of Mechanical Reasoning (MR), Discipline and their interaction on Vocational Guidance Needs of the students. There were two category of MR that is high MR and low MR, and there were two Disciplines that is Arts & Science group. The data were analyzed with the help of 2 x 2 factorial design ANOVA. The results are given in table 1.

Table 1: Summary of 2 x 2 Factorial Design ANOVA for Vocational Guidance Needs, Mechanical Reasoning and Discipline

Source of Variance	Type III Sum of Squares	df	Mean Square	F-value
Mechanical Reasoning (A)	724.975	1	724.975	0.828
Discipline (B)	4675.842	1	4675.842	5.339*
A x B	3383.404	1	3383.404	3.864*
Error	434364.273	496	875.734	
Total	12149637.000	500		

*Significant at 0.05 Level

It is evident from table 1 that F-value for MR is 0.828 with df equal to 1/496 which is not significant at 0.05 level of significance. It indicates that the mean score of low and high MR group students did not differ significantly. So there was no significant influence of MR on Vocational Guidance Needs of the students. In this context, the null hypothesis that there is no significant influence of MR on Vocational Guidance Needs of students is not rejected. It may, therefore be, said that the students of high and low MR group were found to have Vocational Guidance Needs to same extent.

The F-value for Discipline is 5.339 with df equal to 1/496 which is significant at 0.05 level of significance. It indicates that the mean score of Arts group and Science group students differ significantly. So there was significant influence of Discipline on Vocational Guidance Needs of

the students. In this context the null hypothesis that there is no significant influence of Discipline on Vocational Guidance Needs is rejected. The mean score of Vocational Guidance Needs of Science group students is 144.198 and Arts group students is 157.468. It shows that Science group students were found to have more Vocational Guidance Needs as compared to Arts group students.

The F-value for interaction between MR and Discipline is 3.864 with df equal to 1/496 which is significant at 0.05 level of significance. It shows that there is significant influence of interaction between MR and Discipline of the students on Vocational Guidance Needs. In this context, the null hypothesis that there is no significant influence of interaction between MR and Discipline of the students on Vocational Guidance Needs is rejected. The mean score of Vocational Guidance Needs of Science group students of high MR is 135.941 and Science group students of low MR is 152.455. The mean score of Vocational Guidance Needs of Arts group students of high MR is 160.500 and Arts group students of low MR is 154.437. It shows that the Science groups students of high MR have more Vocational Guidance Needs as compared to low HV students group but in Arts group low MR group of students have more Vocational Guidance Needs as compared to high MR group of students.

Findings

The findings of the study were-(1) The students of high and low MR group were found to have Vocational Guidance Needs to same extent. (2) Science group students were found to have more Vocational Guidance Needs as compared to Arts group students. (3) The Science groups students of high MR have more Vocational Guidance Needs as compared to low HV students group but in Arts group low MR group of students have more Vocational Guidance Needs as compared to high MR group of students.

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