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EFFECT OF TEACHER'S FOCUSED GUIDANCE ON ATTAINMENT OF THE LESSON OBJECTIVES IN MATHEMATICS AMONG SECONDARY SCHOOL STUDENTS IN RELATION TO THEIR INTELLIGENCE AND LOCUS OF CONTROL

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Abstract

The present study was designed to study the effect of teacher's focused guidance on the attainment of mathematics objectives. Intelligence and locus of control are the primary factors affecting the performance. The locus of control reflects whether individuals attribute their success and failure to their own behavior or other people or luck. Intelligence refers to use of cognitive abilities to solve abstract problems. Teacher focused guidance means teacher use appropriate teaching strategy keeping into mind the instructional objectives as well as needs of students. To achieve instructional objectives, the teacher chooses specified teaching method, create appropriate classroom environment, interact with the students and provide the feedback to students so that they can achieve specified instructional objectives. In order to conduct the study, six schools from a city of Punjab were selected randomly. From these six schools, 300 students were selected randomly for the study. The scale of locus

Keywords:

Teacher'sFocused Guidance;
Locus of Control;
Intelligence;
Objective based attainment.

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of control by Anand Kumar and S.N Srivastava, 1966and culture free intelligence test (1949) and capsule of teacher's focused guidance and attainment test of lesson objectives prepared be investigator were administered on selected sample. Relevant means, S. D's, t values & three way (2 X 2 X2 ANOVA) were computed to test the hypotheses. The analysis of data significantly concluded that Teacher's focused guidance and Intelligence significantly contributes to attainment gain in homogeneous group. The students with high internal locus of control have high attainment gain scores in mathematics as compared to student with external locus of control from control group.

1. Introduction

"Education is incomplete if it neglects the refinement of heart and discipline of spirit."

- Dr. Radhakrishnan

The main goal of mathematics education is to develop children's abilities for mathematization. The narrow aim of school mathematics is to develop 'useful' capabilities, particularly those relating to numeracy–numbers, number operations, measurements, decimals and percentages. The higher aim is to develop the child's resources to think and reason mathematically, the ability and the attitude to formulate and solve problems. Buta majority of children have a sense of fear and failure regarding Mathematics resulted in high dropoutrate. To develop a positive attitude among students towards mathematics and solve mathematics problem, there is a need that teacher use different teaching strategies while keeping into mind the instructional objectives of specific topic.

1.1 TEACHER'S FOCUSED GUIDANCE

Teacher plays an important role in the process of drawing on and extending the children's thinking towards achieving lesson objectives. The teacher is responsible to establish lesson objectives in accordance with the nature of new mathematical content and the manner in which children's varied thinking is managed by collaboratively building the focus of attention to meet lesson objectives.Guided focusing pattern plays a very important role in fostering student's mathematical thinking with the guidance of teachers where students arrive at the answer through teacher's guiding question. In this pattern, the teacher turns the control of conversation back to the students, who become responsible for explaining their thinking to others. The teacher's role is "one of summarizing that parts which is commonly thought to be shared and then drawing student's attention to a critical point not yet understood". While following this pattern, teacher requires to follow same learning goals i.e. skill efficiency and conceptual understanding "Valuing student" thinking is a necessary element that needs to be incorporated into the development of lesson by teachers. Teacher focused guidance focuses on how a teacher, with a lesson objective in mind systemizes and manage student's own activity.

REVIEW OF LITERATURE

Study carried by Forsyth (2003)indicated that Demonstrations can break up the pace of the classroom while also providing an enjoyable experience for the students. Serva , and Fuller (2004) found that the active teaching techniques are superior to lecture. Feldor , and Brent (2005)found thatmismatch in teaching and learning styles leads to Poor performance, boredom, dropping out, absenteeism, unresponsiveness, loss of potential professionals. Bell (2007) have shown that the match of teaching and learning styles can improve tertiary education students' academic achievement and exert positive influence on their motivation of and attitudes toward study.Akdemir, and Koszalka (2008) found matches between students' learning styles and instructional Strategies did not affect the students' learning performance.Michel, and colleagues (2009) found students in the "active" course were better at learning and memorizing course material than students in the "passive" course. Hackathorn, et al., (2010) found that Instructors may useelaborate demonstrations, structured activities, journaling, small group discussions, quizzes, interactive lecture cues, videos, humorous stories, taking field trips, and games, to get students involved and active in the learning process.

Siburt et al., (2011) found students taught using the problem manipulation metacognitive style formed mostly positive attitudes regarding their instruction and learning. But, they did not determine a discrepancy between academic achievements of the two groups of students. The study of Nafees, Farooq, Tahirkheli , and Akhtar (2012) revealed that the problem-based group reported a significantly higher level of academic achievement than the traditional lecture-based group. Tulbure (2012) found significant differences between the achievement scores obtained by three categories of learners (convergers, divergers and accommodators) from two faculties of a Romanian University after the cooperative learning strategy was implemented. Zhao et al., (2013) found that students who were taught metacognition in the classroom, performed better on the last exam as opposed to students who were taught using traditional lecture.The study of Ashraf (2014) provides evidence of correlation between match-mismatch of teaching and learning styles with academic performance of Student.Fayombo (2015) revealed that teaching strategies and learning styles are very important in academic achievement and that matching both learning and teaching styles is achievable and rewarding for the learners and the instructors.

1.2 LOCUS OF CONTROL

Locus of control is the degree towhich individuals feel that they have control over reinforcements or outcomes ofbehaviours (Rotter, 1990). One would have an internal locus of control if he or she feelsas though consequences of his or her actions are contingent on personal behaviours orcharacteristics (Rotter, 1990). On the other hand, an individual with an external locus ofcontrol would expect that the outcome or reinforcement is a function of luck, fate, orchance and that this consequence is generally unpredictable (Rotter, 1990).Locus of control refers to one's belief in his or her abilities to control life events(Strauser, 2002). The belief of locus of control is related to what reinforcements have happenedthroughout the individuals' lives, namely the results, prizes, their success orfailures, refer to. These attributions refer not only to chance, fate, and powerfulpeople out of one's control, but also to the results of his/her own attitudes (BasımandSesen, 2006).In other words, locus of control is defined as one's thoughts ofhis/her belief that his/her own power or forces out of his/her control are influentialin any positive or negative situation occurring during his/her life (Sardogan,2006).

REVIEW OF LITERATURE RELATED TO LOCUS OF CONTROL

Klein and Warnet (2000) have shown that the internal facet of locus of control plays an important role in influencing the experiences in people's lives. Selart (2005)found that managers with low internal locus of control have more tendencies to consult to group decision than the ones with high locus of control do. Additionally, the managers with external locus of control take the role of participant in decision making more than the ones with low internal locus of control.Coban, and Hamamcı (2006) found that the individuals with internal locus of control mostly use logical decision-making strategy. it has been found that there is a negative and low correlationbetween logical decision-making strategy and locus of control. Aube et al.,(2007) come out with that locus of control and work autonomy have a considerable effect on organizational support and active participation.Chen, and Silverthorn(2008) , in this study it has come out that individual with high internal control have high work performance, content and low stress.Kormanik, and Rocco (2009) found that the less internal locus of control an individual perceives, the greater thelikelihood for stress and depression. Balbag, Cemrek, and Mutlu(2010) found that internal locus of control; self-esteem and extraversion predicted hopelessness.

Ghasemzadeh, and Saadat (2011) revealed that female students received higher scores as compared to male students on locus of control. Internal locus of control with meaningful level had a direct and positive relationship with the educational achievement of students.Kutanis, Mesci, and Ovdur(2011)concluded that learning performances of the students with internal locus of controlare high, and they are more proactive and effective during the learning process. Onthe other hand, the ones with external locus of control are more passive and reactiveduring this period.Dharani, and Peters(2012) found a statisticallysignificant relationship between an individual's locus of control expectancy and the level of happiness of anindividual.

Mali (2013) has revealed that that there existspositive correlation relationship between internal locus ofcontrol and performance of employees.Zaidi, and Mohsin (2013) found thatthe gender difference is significant on Locus of Control. The study of Chuang, and Shy(2013) indicated that there is significant correlation between agency workers, External Locus of Control and Job Satisfaction. Coping Behavior significantly influences Job Satisfaction, and External Locus of Control significantly influences Job Satisfaction. Moderating effect Coping Behavior between

External Locus of Control and Job Satisfaction is supported.Hasan, and Khalid (2014) revealed that high achieving students scored low on academic locus of control which indicates their strong internal academic orientation than low achieving students. Women are significantly high on an internal academic locus of control indicating less internal academic orientation than men.

Shojaee, and French (2014) revealedthat there was a positive and linear association between the internal locus of control andall six well-being components. Findings from the current research demonstrated that individualswho have an internal tendency in their locus of control are in higher levels of mental health incompression with individuals with external locus of control. Naik (2015) found that there did not exist significant difference on locus of control among males & females, science & arts and urban & rural college students.Moein, and Sharifi (2016) found that there is a negative significant relationship between internal locus of control and academic failure. On the other side, positive significant relationship between external source of control and academic failure exist. Abid, Kanwal, Nasir, and Iqbal (2016) revealed that learning performances of the students with internal locus of control are high, and they are more proactive and effective during the learning process. On the other hand, the ones with external locus of control are more passive and reactive during this period. Apart from these, it is revealed that there are some differences among students' demographic groups and their learning factors.Fatemi, and Hoseiniyan (2016) showed that locus of control was more internalized in male students than in female students. The results further revealed that male students attributed their successes to themselves and considered external factors to be responsible for their failure. Kaur (2016) found that underachievers are high on the construct of externality. Choudhury and Borooah (2017) revealed that hat there exist significant positive correlation between external locus of control and academic achievement of the students.Mohamed, Mohammed and Ahmed (2018) revealed that there is a significant relation between LOC and the academic achievement among the experimental group.

1.3 INTELLIGENCE

Intelligence, in psychology, the general mental ability involved in calculating, reasoning, perceiving relationships and analogies, learning quickly, storing and retrieving information,

using language fluently, classifying, generalizing and adjusting to new situations. Alfred Binet, the French psychologist, defined intelligence as the totality of mental processes involved in adapting to the environment. Although there remains s strong tendency to view intelligence as a purely intellectual or cognitive function, considerable evidence suggests that intelligence has many facets.

REVIEW RELATED TO INTELLIGENCE

Busato et al., (2000) confirmed that intellectual ability was associated positively with academic success of the students.Petrides et al., (2002) studied the role of trait intelligence in academic performance and demonstrated that emotional intelligence was related to scholastic achievement. De Smedt et al., (2003) found no difference in intelligence and academic achievement. Furnham, and Tomas (2004) found significant and positive association between statistic examination grade and intelligence. The study of Deary et al. (2004) revealed significant positive relationship between intelligence and educational achievement.Dhall, and Praveen (2005) revealed that intelligence was significantly and positively (0.541) related with academic achievement. The result of Parkinson, and Taggar (2006) indicated that intelligence was found to be positively associated with student'sperformance. The study of Palaniappan (2007)indicated the positive relationship between intelligence and academic achievement.Chamorro, and Adrian (2008) revealed that significant relationship of intelligence with academic achievement and learning approaches.Naderi et al., (2008) revealed the intelligence was not significantly related to academic achievement..

The result of Arini et al., (2009) showed that intelligence and motivation influence significantly the student's academic achievement. Naderi et al. (2010) revealed that intelligence was not related to academic achievement for both males and females.Ghazi et al., (2011) indicated that there was a significant positive relationship (r=.289) between overall perceived multiple intelligence and overall academic achievement of the students.Fallahzadeh (2011) found moderate relationship (0.41) between emotional intelligence and academic achievement. Fatima, Shah, and Kiani (2011) found that there was Positive and significant relationship between emotional intelligence and academic achievement of the students. The study of Mondal, Paul, and Bandyopadhyay (2012) revealed that few demographic factors (gender, age, teaching

experience, qualification and training)positively impacted on the level of teacher's emotional intelligence while some were not significant.Nasir (2012)founded positive and significant relationship between Emotional Intelligence and Academic Achievement.Radfer et al., (2012) founded positive and significant relationship between Emotional Intelligenceand Academic Achievement.Gilani, Waheed, Saleem, and shoukat (2015) founded a negative and insignificant association between emotional intelligence and academic achievement of postgraduate students. Perera, and DiGiacomo (2015) concluded that trait emotional intelligence was found to be indirectly associated with Academic achievement.Oyewunmi, Osibanjo, and Adeniji, (2016) indicated that association between emotional intelligence and the academic achievement of university undergraduates was strong. Vinodhkumarand Pankajam (2017) inferred that significant relationship between Social Intelligence and Achievement in science among High School Students exist.Molla (2018) reveals that there is relationship between emotional intelligence and academic achievement motivation among college students.

1.4 RATIONALE OF THE STUDY

Present Mathematics Curriculum is too much vast with huge contents and due to which sometimes the students feel fear and sense of boredom in this very useful subject. The wholesome fact is that most of the students are not interested in the subject of mathematics.Kar (2000) reported that more than 90 % of the failure at secondary level is due to poor performance in mathematics. As teachers and so as teacher educators, it becomes incumbent upon us to think of addressing this problem.Teachers play a very significant role in shaping of the youth of the country who are to navigate the ship of the nation forward, braving the shoals and rocks that may come in their way. They help in extending the children's thinking towards achievement of the lesson objectives in mathematics. Teacher's Focused Guidance assists the pupils in making sense of the mathematical topics through student's conceptual understanding that ultimately fosters their mathematical thinking and helps to change over to an education system which encourages curiosity, logical thinking reduces fear and inculcate interest among students towards mathematics.

1.5 STATEMENT OF THE PROBLEM

EFFECT OF TEACHER'S FOCUSED GUIDANCE ON ATTAINMENT OF THE LESSON OBJECTIVES IN MATHEMATICS AMONG SECONDARY SCHOOL STUDENTS IN RELATION TO THEIR INTELLIGENCE AND LOCUS OF CONTROL

1.6 OPERATIONAL DEFINITION

Intelligence is the ability to use general cognitive ability, novel or abstract problem-solvingcapability purely general ability to discriminate andperceive relations between any fundaments, new or old experience and knowledge.

Locus of control is the degree to which individuals feel that they have control over reinforcements or outcomes of behaviours.

Internal locus of control: The extent, to which a person believes that he can control what happens to him, is referred to as a belief in internal control of reinforcement.

External locus of control: A belief that one is controlled by luck, fate or powerful others, is referred to as a belief in external control of reinforcement.

Teacher focused guidance means teacher uses different teaching strategies keeping into mind the specific instructional objectives of specific topic to achieve that objectives.

Attainment test of lesson objectivesmean test of mathematics based on objectives to teach specific topics**.**

1.7 OBJECTIVES OF THE STUDY

1. To frame the plan of lesson objectives in mathematics for 9^{th} class students.
2. To develop the capsule of teacher's focused guidance pattern.
3. To study the effect of this capsule on the attainment of the lesson objectives in mathematics in relation to the intelligence and locus of control

1.8 HYPOTHESIS OF THE STUDY

H_1: There exists no difference in attainment of the lesson objective between experimental and control group.

H_2: There exists no difference in attainment of the lesson objective between high intelligence and low intelligence groups.

H_3: There exists no difference in attainment of the lesson objective among students with internal and external locus of control.

H_1: There exists no difference in attainment of the lesson objective between experimental and control group.

H_4: There exists no difference in attainment of the lesson objective between experimental and control group belonging to high intelligence and low intelligence levels.

H_5: There exists no difference in attainment of the lesson objective between experimental and control group belonging to internal and external locus of control.

H_6: There exists no difference in attainment of the lesson objective between experimental and control group belonging to internal and external locus of control with high and low intelligence.

H_7: There exists no difference in attainment of the lesson objective between experimental and control group belonging to different levels of locus of control and different level of intelligence.

2. Research Methodology

Sample

Initially, 6 secondary schools were selected randomly from Jalandhar city. From these schools, all the 9^{th} class students were selected to make a sample of 300 subjects.

Design

In the present study 2x2x2 factorial design has been employed whereinintelligence and locus of control were studied as independent variable and attainment gain scores was studied as dependent variable.

Tools

1. Capsule of teacher's focused guidance(prepared by the investigator).
2. Attainment test of lesson objectives (prepared by the investigator).
3. Locus of Control Scale (Anand Kumar and S.N Srivastava, 1966).
4. Culture Fair Test of Intelligence (Scale 3) (Cattel).

Procedure

300 students were selected randomly from 6 schools. Intelligence test was administered on 300 students and divided the sample into two groups – High intelligence group and low intelligence group. After that locus of control test was administered on these two groups and divided each group into two sub group- internal locus of control group and external locus of control group. In this study, there were eight groups. Four groups were considered as experimental group and other four groups were considered as control group.

Statistical Techniques

Mean, Standard Deviation and2x2x2 ANOVAwere employed to treat the raw scores and arrive at the result

3. Resultsand Analysis

	Experimental Group		**Control Group**	
High intelligence	Internal locus of control	M_1 =13.625 SD_1 = 5.853 N_1= 8	M_2 =7.66 SD_2 = 3.519 N_2 = 3	$M_{1\ 2}$=10.64 SD_{12}= 4.68 N_{12}= 11
	External locus of control	M_3=13.904 SD_3 = 6.139 N_3 = 21	M_4 =3.93 SD_4 = 3.621 N_4= 16	M_{34}=8.917 SD_{34} = 4.88 N_{34}= 37
Low Intelligence	Internal locus of control	M_5=11.2 SD_5 = 7.360 N_5= 10	M_6=6.66 SD_6 = 2.645 N_6= 9	M_{56}=8.93 SD_{56} = 5.01 N_{56}= 19
	External locus of control	M_7=13.166 SD_7 = 4.693 N_7= 19	M_8 =2.23 SD_8 = 1.414 N_8= 2	M_{78}=7.3 SD_{78} =3.05 N_{78}= 21
		M_{1357}=12.97 SD_{1357} = 6.011 N_{1357}= 58	M_{2468}=5.12 SD_{2468} = 2.79 N_{2468}= 30	

TABLE 1

MEANS OF SUB-GROUPS OF ANOVA FOR 2x2x2 DESIGN FOR ATTAINMENT GAIN SCORES IN MATHEMATICS

In order to analyse the variance in attainment gain scores in mathematics of various sub-group, the obtained scores are subjected to ANOVA and the results has been presented in table 1:

TABLE 2

SUMMARY OF ANOVA FOR 2x2x2 DESIGN FOR ATTAINMENT GAIN SCORES IN MATHEMATICS

Sources of Variance	**SS**	**Df**	**MSS**	**F-Ratio**
Treatment Group (A)	752.473	1	752.473	43.47**
Type of Intelligence (B)	99.786	1	99.786	6.94**
Type of LOC (C)	12.91	1	12.91	0.74
Interaction (AXB)	91.212	1	91.212	5.24*
Interaction (BXC)	59.935	1	59.935	3.44
Interaction (CXA)	15.183	1	15.183	0.87
Interaction (AXBXC)	173.867	1	173.867	9.99**
Within cells	1392.679	80	17.41	

*Significant at 0.05 level of confidence

**Significant at 0.01 level of confidence

3.1 TREATMENT GROUP (A)

It may be observed from table that F-Ratio for the difference between means of two groups viz. experimental group and control group on the attainment gain scores in mathematics is found to be significant at 0.01 level of confidence. Thus, the data provides sufficient evidence to reject the hypothesis (1) namely ; “there exists no difference in attainment of the lesson objective between experimental and control group.”

Further , from the mean table 1, it is observed that mean attainment gain scores in mathematics of experimental group is higher than the mean attainment gain scores of students from control group. Thus, it can be interpreted that treatment has effect on the attainment in mathematics.

3.2 INTELLIGENCE (B)

It may be observed from table 2 that F-Ratio for the difference between means of students with high intelligence and low intelligence on the attainment of gain scores mathematics is found to be significant at 0.01 level of confidence. Thus, the data provides sufficient evidence to reject the hypothesis (2) namely ; "there exists no difference in attainment of the lesson objective between high intelligence and low intelligence groups."

3.3 LOCUS OF CONTROL

It may be observed from table .2 that F-Ratio for the difference between means of students with Internal locus of control and external locus of control on the attainment of gain scores in mathematics is found to be insignificant even at 0.05 level of confidence. Thus, the data provides sufficient evidence to reject the hypothesis (3) namely;"there exists no difference in attainment of the lesson objective among students with internal and external locus of control."

3.4 TREATMENT GROUP X INTELLIGENCE (AXB)

It may be observed from table 2 that F-Ratio for the interaction between Treatment group and intelligence on the attainment of gain scores in mathematics is found to be insignificant even at 0.05 level of confidence. Thus, the data provides sufficient evidence to reject the hypothesis (4) namely; "there exists no difference in attainment of the lesson objective between experimental and control group belonging to high intelligence and low intelligence levels."

Further t -ratio have been calculated for sub cells of A X B and put in table 3 below:

TABLE 3

t-RATIOS BETWEENS THE DIFFERENCE IN MEANS OF VARIOUS CELLS OF A X B INTERACTION OF 2 X 2 X 2 DESIGN ON THE GAIN SCORES OF ATTAINMENT

Sub groups	Mean	M	SD	t-ratios
M_{13}– M_{24}	M_{13}= 13.764 M_{24} = 5.79	7.974	1.381	5.774**
M_{13} – M_{57}	M_{13}= 13.764	1.581	1.576	1.00

	M_{57} = 12.183			
$M_{13} – M_{68}$	M_{13}= 13.764 M_{57} = 12.183	9.324	1.269	7.347**
$M_{24} – M_{57}$	M_{13}= 13.764 M_{57} = 12.183	6.393	1.385	4.615**
$M_{24} – M_{68}$	M_{13}= 13.764 M_{57} = 12.183	1.35	1.021	1.322
$M_{57} – M_{68}$	M_{13}= 13.764 M_{57} = 12.183	7.74	1.274	6.077**

It may be observed form the Table 3 that t – ratios for various sub – groups namely, M_{13}- $M_{24,}$ M_{13}-M_{68}, M_{24}-M_{57}, M_{57}-M_{68} are found to be significant at the 0.01 level of confidence.

This suggests that

1.The students with high intelligence from experimental group have high attainment gain scores in mathematics as compared to students with high intelligence from control group($M_{13} – M_{24}$) it means that Teacher's Focused Guidance significantly contributes to attainment gain.

2. The students with high intelligence from experimental group have high attainment gain scores in mathematics asa compared to students with low intelligence from control group ($M_{13} – M_{68}$). It means that Teacher's Focused Guidance given to high intelligence students enhances their attainment.

3. The students with high intelligence from control group have low attainment gain scores in mathematics as a compared to students with low intelligence from experimental group ($M_{24} – M_{57}$). It means that intelligence plays an important role in the attainment gain scores and Teacher's Focused Guidance is not able to nullify the role of intelligence.

4. the students with low intelligence from experimental group have high attainment gain score in mathematics than students with low intelligence from control group ($M_{57} – M_{68}$). It means that Teacher's Focused Guidance significantly contributes to attainment gain in homogeneous groups.

3.5 INTELLIGENCE X LOCUS OF CONTROL (BXC)

It may be observed from thetable 2, that the F-ratio for the interaction between intelligence and locus of control on the attainment gain scores in mathematics is found to be insignificant even at 0.05 level of significance. Thus, the data provides significant evidence to accept the hypothesis H (5) namely;**"**There exists no difference in attainment of the lesson objective between experimental and control group belonging to internal and external locus of control."

3.6 TREATMENT GROUP XLOCUS OF CONTROL (AXC)

It may be observed from the table 2, that the F-ratio for the interaction between treatment and locus of control on the attainment gain scores in mathematics is found to be insignificant even at 0.05 level of significance. Thus, the data provides significant evidence to accept the hypothesis H (6) namely; "There exists no difference in attainment of the lesson objective between experimental and control group belonging to internal and external locus of control with high and low intelligence."

3.7 TREATMENT GROUP X INTELLIGENCE X LOCUS OF CONTRL (A X B X C)

It may be observed from the table 2, that the F-ratio for the interaction betweenintelligence and locus of control on the attainment gain scores in mathematics is found to be significant at 0.01 level of significance. Thus, the data provides significant evidence to reject the hypothesis H (6) namely; "There exists no difference in attainment of the lesson objective between experimental and control group belonging to different levels of locus of control and different level of intelligence." Further t- ratio have been calculated for sub cells of A X B X C and put in table 4 below:

TABLE 4

t-RATIO BETWEEN THE DIFFERENCE IH MEANS OF VARIOUS CELLS OF A X B XC INTERACTION OF 2 X 2 X 2 DESIGN ON THE GAIN SCORES OF ATTAINMENT

Sun- group	Mean	SD	t-ratios
$M_1 - M_2$	5.965	3.297	1.809
$M_1 - M_3$	0.279	2.464	0.405
$M_1 - M_4$	9.695	2.25	4.30**

$M_1 – M_5$	2.425	3.11	0.77
$M_1 – M_6$	6.965	2.24	3.109**
$M_1 – M_7$	0.459	2.33	0.196
$M_1 – M_8$	11.359	2.29	4.975**

**Significant at 0.01 level of confidence

It may be observed from the table 3 that t- ratio for various sub – groups namely ,$M_1 – M_4$, $M_1 – M_6$, M_1-M_8 are found to be significant at 0.01 level of confidence.

This suggest that

1 The students with high intelligence from experimental group have high attainment gain scores in mathematics as compared to students with high intelligence from control group.($M_1 – M_4$)

2. The students with high intelligence from experimental group have high attainment gain scores in mathematics as compared to students with Low intelligence from control group ($M_1 – M_6$).

3. The students with high intelligence from experimental group have high attainment gain scores in mathematics as comparedto students with high intelligence from control group (M_1 - M_8).

FINDINGS OF THE STUDY

- There exists difference in attainment of the lesson objective between experimental and control group.
- There exists difference in attainment of the lesson objective between high intelligence and low intelligence groups."
- There exists difference in attainment of the lesson objective among students with internal and external locus of control.
- There exists difference in attainment of the lesson objective between experimental and control group belonging to high intelligence and low intelligence levels."
- There exists no difference in attainment of the lesson objective between experimental and control group belonging to internal and external locus of control.
- There exists no difference in attainment of the lesson objective between experimental and control group belonging to internal and external locus of control with high and low intelligence.
- There exists difference in attainment of the lesson objective between experimental and control group belonging to different levels of locus of control and different level of intelligence

4. Conclusion

The finding that there exists no significant difference in attainment of the lesson objective among students with internal and external locus of control is rejected. This finding is in tune with findingof Ghasemzadeh, and Saadat (2011), Kutanis, Mesci, and Ovdur (2011), Hasan and Khalid (2014), Abid, Kanwal, Nasir, and Iqbal (2016), Kaur (2016). The study has important implications in the field of school counseling.Firstly, the school counselor should identify underachievers and find out the reasons of underachievement. The counselor finds that underachievers lack personal responsibility and let others have their control. They lack a connection between their efforts and its outcomes. Then counselor should realize them the value of internal locus of control and their potentialities which lead underachiever to success. The second finding that there exists no difference in attainment of the lesson objective between high intelligence and low intelligence groups is rejected. The presenting finding is in tune with the finding of Ghazi et al. (2011), Arini et al. (2009), Naderi et al. (2010), Fatima, Shah, and Kiani (2011), Nasir (2012), Fallahzadeh (2011), radfer et al. (2012), Giani , Waheed, Saleem, and shout (2015), Oyewunmi, Osibanjo, and Adeniji (2016). The third finding i.e there exists no difference in attainment of the lesson objective between experimental and control group. The presenting finding is in tune with the finding of Zippert (1985) ,Servaand Fuller (2004), Forrest (2005), Siburt et al. (2011), Khan et al. (2011), Nafees, Farooq, Tahirkheli , and Akhtar (2012), Zhao et al. (2013), stated that teaching strategies that matched assessed learning styles of students produced a higher level of achievement. This finding of the present study clearly show significant difference in the attainment gain scores in mathematics between the students who are provided Teacher's Focused Guidance and the students who are not provided Teacher's Focused Guidance. Teacher's Focused Guidance significantly leads to the attainment of lesson objectives in mathematics. Some students are incredibly bright and have a good to superior intelligence level, but still that doesn't seem to be enough to ensure their success in mathematics. The findings reflect that through Teacher's Focused Guidance, teachers assist the students in extending their thinking towards the achievement of lesson objectives in mathematics which may encourage curiosity, logical thinking, reduces fear and inculcate interest among students towards mathematics. That's way mathematics teacher should adopt appropriate teaching strategy according to instructional objectives of topic.

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