Selective Attention and Response Set as the Function of Divergent Production Abilities

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Abstract: -

Purpose of the study is to find out whether the Selective Attention and Response Set of students are affect by Divergent Production Abilities, for this investigation Sample of 120 undergraduate subjects were taken for this study from the population which was equally classified in which students having higher level of divergent production abilities 60 (30 Male & 30 Female) & students having lower level of divergent production abilities 60 (30 Male & 30 Female) from Marathwada region irrespective of area of living. The sampling was simple random (a type of probability sampling). Divergent Production Abilities was determined on the score obtained from the norms given in the Divergent Production Abilities by K.N. Shrma, and to assess the Selective attention and response set of students the Stroop Colour and Word Test by Charles Golden & Shawna Freshwater (2002) Stoelting Co. IL. was used. Mean, S.D. & Multiple Regression Analysis was applied to find out the difference between groups. The result obtained through the study showed that Divergent Production Abilities with Gender were statistically correlated and significant predictor of selective attention and response set of students.

Keywords: Divergent Production Abilities, Selective Attention and Response Set, Gender

Introduction: -

Divergent production is the ability to deliver novel answers for an issue. It is one of the abilities perceived in the structure of mind model. In divergent production we can deliver extraordinary and novel answers for issues.

Divergent reasoning is a perspective or technique used to produce inventive thoughts by investigating numerous potential arrangements. It regularly happens in an unconstrained, free-streaming, "non-direct" way, with the end goal that numerous thoughts are created in a developing intellectual style. Numerous potential arrangements are investigated in a short measure of time, and surprising associations are drawn. Following divergent reasoning, thoughts and data are coordinated and organized utilizing joined reasoning, which follows a specific set of legitimate strides to show up at one arrangement, which sometimes is a "right" arrangement. The clinician J.P. Guilford originally begat the terms joined reasoning and divergent reasoning

In Guilford's Structure of Intellect (SI) hypothesis, insight is seen as including activities, substance, and items. There are 5 sorts of tasks (cognizance, memory, divergent production, concurrent production, assessment), 6 sorts of items (u nits, classes, relations, frameworks, changes, and suggestions), and 5 sorts of substance (visual, hear-able, emblematic, semantic, conduct). Since every one of these measurements is free, there are hypothetically 150 unique segments of insight.

Guilford investigated and built up a wide assortment of psychometric tests to gauge the particular abilities anticipated by SI hypothesis. These tests give an operational meaning of the numerous abilities proposed by the hypothesis. Moreover, factor examination was utilized to figure out which tests seemed to quantify the equivalent or various abilities. Incidentally, it is intriguing to take note of that a significant catalyst for Guilford's hypothesis was his advantage in innovativeness (Guilford, 1950 and 1967). The divergent production activity recognizes various sorts of inventive abilities.

Selective attention and response set is the way toward zeroing in on a specific item in the climate for a specific timeframe. Attention is a restricted asset, so selective attention permits us to block out insignificant subtleties and spotlight on what makes a difference. This varies from deliberate visual

deficiency, which is the point at which you centre hard around a certain something and neglect to see sudden things entering your visual field.

Kharkhurin, A. V. (2011) presents a methodical examination of the psychological instruments of selective attention that conceivably intercede the impact of bilingualism on inventive abilities. The presentation of 90 bilingual undergrads with various capability levels in English was analyzed on a battery of inventiveness and psychological measures. Semantically progressed bilinguals showed more prominent abilities to deliver unique and helpful thoughts and to think past standard classes in innovative critical thinking. Two systems of selective attention were recognized as supporters of the improvement of bilingual imaginative abilities. The restraint of immaterial data appeared to upgrade the ability to create unique and valuable thoughts. The assistance of pertinent data was probably going to help the capacity to enact a large number of random ideas and work through the ideas previously actuated. Bilinguals with various degrees of etymological abilities were found to use these systems contrastingly and consequently to utilize various methodologies in innovative critical thinking.

Selective attention is distinguished as a special psychological cycle in which bilingual youngsters show steady preferences over monolingual kids. The develop is clarified by Bialystok, E. (1992) when all is said in done terms and then operationalized inside a particular structure for metalinguistic abilities. Exploration contrasting bilingual and monolingual youngsters settling assignments in which bilingual kids dominate in issues requiring elevated levels of selective attention is accounted for. The examination is applied to other psychological spaces to investigate the degree to which the selective attention advantage for bilingual youngsters reaches out past language fitness.

Two trials are accounted for by Groborz, M., and Necka, E. (2003) in which connections between psychological control and generative just as evaluative parts of imagination were contemplated. Psychological control was evaluated through the obstruction impacts of the Navon and Stroop undertakings. Generative and evaluative parts of imagination were concentrated with a technique, called Generation and Evaluation (GenEva). Every member originally produced various answers for a set of divergent issues, and then the person assessed arrangements gave by another member, picked at random. The information recommend that members scoring high on Urban and Jellen's Test for Creative Thinking-

Drawing Production demonstrated preferred records of psychological authority over members with lower scores. A comparable relationship has been found concerning the inventiveness of members' productions (GenEva strategy) however not their familiarity and adaptability. These discoveries are deciphered as far as essential intellectual cycles, which are most likely answerable for thought production. It likewise created the impression that intellectual control permitted more precise assessment of others' thoughts, however just on account of members with worldwide psychological style of data handling.

Statement of the Problem:-

"To study the Selective Attention and Response Set as the function of Divergent Production Abilities."

Purpose and Objectives:-

1. To find out whether the Selective Attention and Response Set of students are affect by Divergent Production Abilities.
2. To investigate whether level of Creativity i.e. Production Abilities of students may influenced to Selective Attention and Response Set of students.

Hypotheses:-

1) Divergent Production Abilities with Gender is correlated with selective attention and response set of students.

2) Divergent Production Abilities is significant predictor of selective attention and response set of students.

3) Gender is significant predictor of selective attention and response set of students.

Participants:-

Sample of 120 undergraduate subjects were taken for this study from the population which was equally classified in which students having higher level of divergent production abilities 60 (30 Male & 30 Female) & students having lower level of divergent production abilities 60 (30 Male & 30 Female) from

Marathwada region irrespective of area of living. The sampling was simple random (a type of probability sampling). All the subjects were similar kind of socio-economic status.

The distribution of effective sample

Variables	Students having higher level of divergent production abilities.	Students having lower level of divergent production abilities.	Total
Male	30	30	60
Female	30	30	60
Total	60	60	N = 120

Variables:-

1) Divergent production abilities & Gender of the students are independent variable in this study.

2) Selective attention and response set of students is dependent variables in this study.

Design:-

To attain objectives of the present study, 2 X 2 factorial design was employed to find out the significance differences between variables.

Research Design

		A	
		A1	A2
B	B1	A1B1	A2B1
	B2	A1B2	A2B2

➤ **A** = Divergent production abilities

  ▪ **A1** = Students having higher level of divergent production abilities.

  ▪ **A2** = Students having lower level of divergent production abilities.

➤ **B** = Gender

  ▪ **B1** = Male

  ▪ **B1** = Female

Measurement Tools:-

1. **Divergent Production Abilities: -** Divergent Production Abilities was determined on the score obtained from the norms given in the Divergent Production Abilities by K.N. Shrma.

2. **Stroop Colour and Word test: -** To assess the Selective attention and response set of students the Stroop Colour and Word Test by Charles Golden & Shawna Freshwater (2002) Stoelting Co. IL. was used, reliability of the stroop score is highly consistent across different version of the test. In all cases experimenter has looked test – retest reliability i.e. 0.70.

Procedure:-

After having the sample selected, the researcher administered the tests on 120 subjects and recorded the scores of the tests. Thus, the collected data were analyzed by statistical techniques.

Statistical Treatment:-

The sample was available for statistical analysis consisted of 120 subjects after data collection. For the each subject, initially data of each group was separately scrutinized by employing descriptive statistics. The statistical analysis was mainly consisted of Mean, S.D. Multiple Regression Analysis on Variables.

Result Analysis:-

Table 1.1 Summary of Descriptive Analysis of Psychological Measures i.e. Selective Attention and Response set and Divergent Production Abilities with Gender.

Psychological Measures (DV)	Psychological Measures (IV)	Mean	SD	Kolmogorov-Smirnov[a] (Z)	P
Selective attention and response set	Students having higher level of divergent production abilities.	20.07	5.11	0.183	0.01
	Students having lower level of divergent production abilities.	14.68	7.10	0.132	0.01
	Male Students	19.85	39.68	0.232	0.01
	Female Students	14.90	43.99	0.114	0.01

Figure 1.1 Graphical Representation of Normal Q-Q Plot of Psychological Measures Selective Attention and Response set and Divergent Production Abilities with Gender.
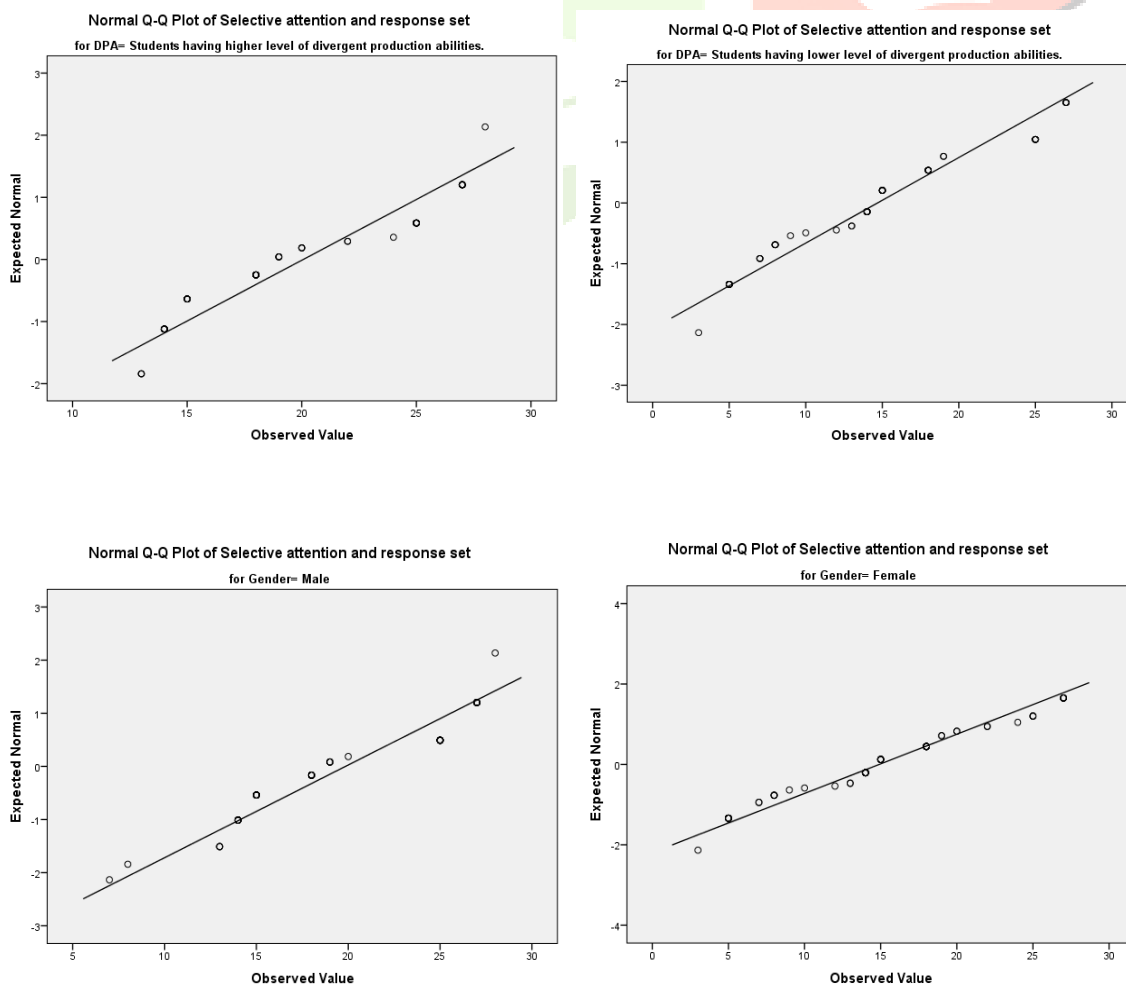
Descriptive analysis on measure of various considered constructs including Psychological Measures i.e. Selective Attention and Response set and Divergent Production Abilities with Gender are computed as 20.07, 14.68, 19.85, and 14.90 respectively. As all these values fall in range of average, the students cannot be characterized with particular type of Variables affect their personal attributes.

Likewise Kolmogorov-Smirnov (Z Test) was found as significant which further uncovered that information got on each viewed as mental builds is regularly conveyed for this thought about populace.

Multiple Regression Analysis: -

Result Table 1.2. Summary of Multiple Regression Analysis of Psychological Measures i.e. Selective Attention and Response set and Divergent Production Abilities with Gender.

Psychological Measures	Model	Model Summary				Coefficients					
		R	R^2	$R^{2\Delta}$	F	p	B	SE	β	t	p
Selective Attention and Response Set of Students	Model A	.546[a]	.298	.286	24.81	.000[b]					
	(Constant)						32.88	2.26		14.53	.000
	Divergent Production Abilities with Gender						-5.38	1.04	-.402	-5.19	.000
							-4.95	1.04	-.396	-4.77	.000

Multiple regressions were performed to Psychological Measures i.e. Selective Attention and Response set and Divergent Production Abilities with Gender. Correlations were weak r = 0.298, p < .001. All predictor variables i.e. Divergent Production Abilities with Gender were statistically correlated on selective attention and response set of students which indicates that the data was suitably correlated with the dependent variable for examination through multiple linear regressions to be reliably undertaken.

Since a priori hypotheses i.e. Divergent Production Abilities with Gender is significant predictor of selective attention and response set of students had been made to determine the order of entry of the predictor variables, a direct method was used for the multiple linear regression analysis.

Thus stated hypothesis supported by results and it can concluded that the Regression coefficients of the Divergent Production Abilities with Gender were statistically correlated with selective attention and response set of students.

Evaluation of Model with the amount of variance explained: -

Figure No. 1.2. Showing Amount of Variance Explained for Divergent Production Abilities with Gender on selective attention and response set of students.
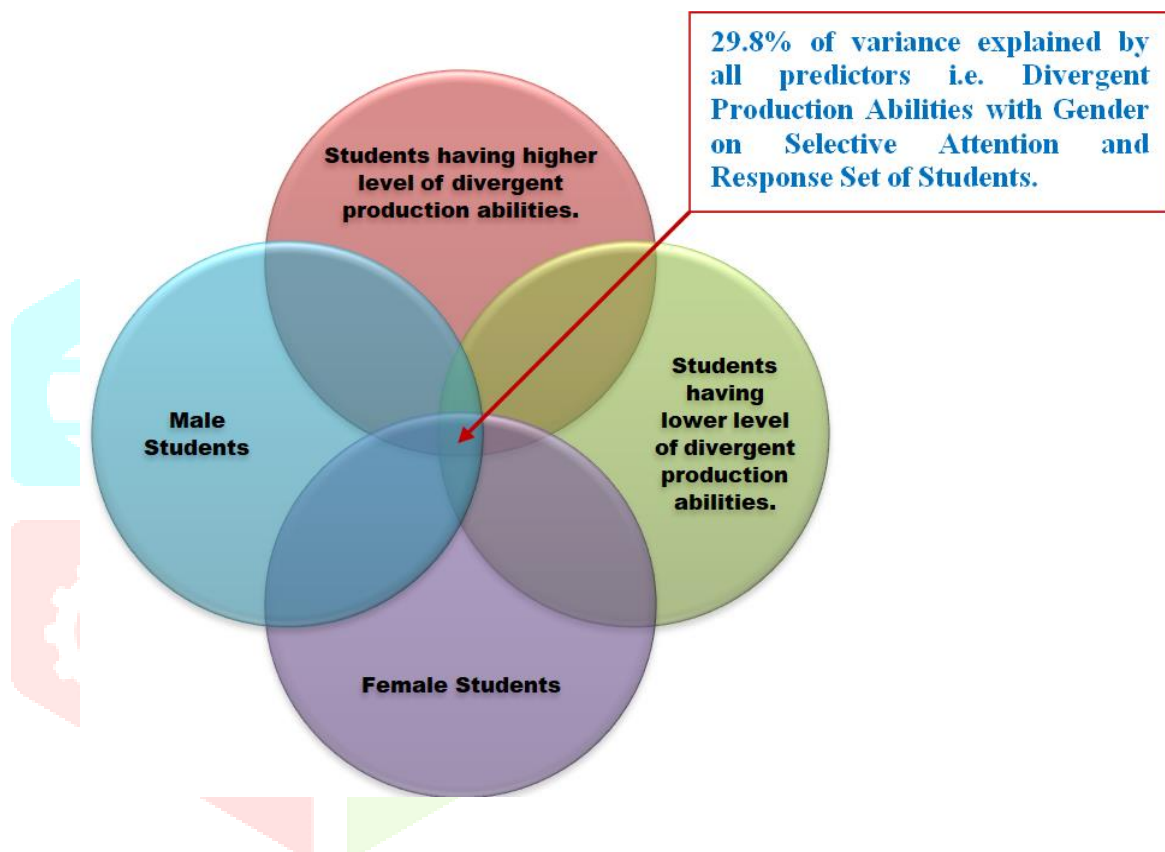

The two independent variables Divergent Production Abilities with Gender explained 29.8% of variance in selective attention and response set of students, Analysis of Variance ($F_{(2, 198)} = 24.81$, $p < .01$) indicates that the model as a whole significant.

Thus it is concluded that the Divergent Production Abilities with Gender explained 29.8% of variance from each other in selective attention and response set of students.

Evaluation each of the IVs: -

Figure No. 1.3. Showing Amount of effect of Divergent Production Abilities with Gender on selective attention and response set of students.
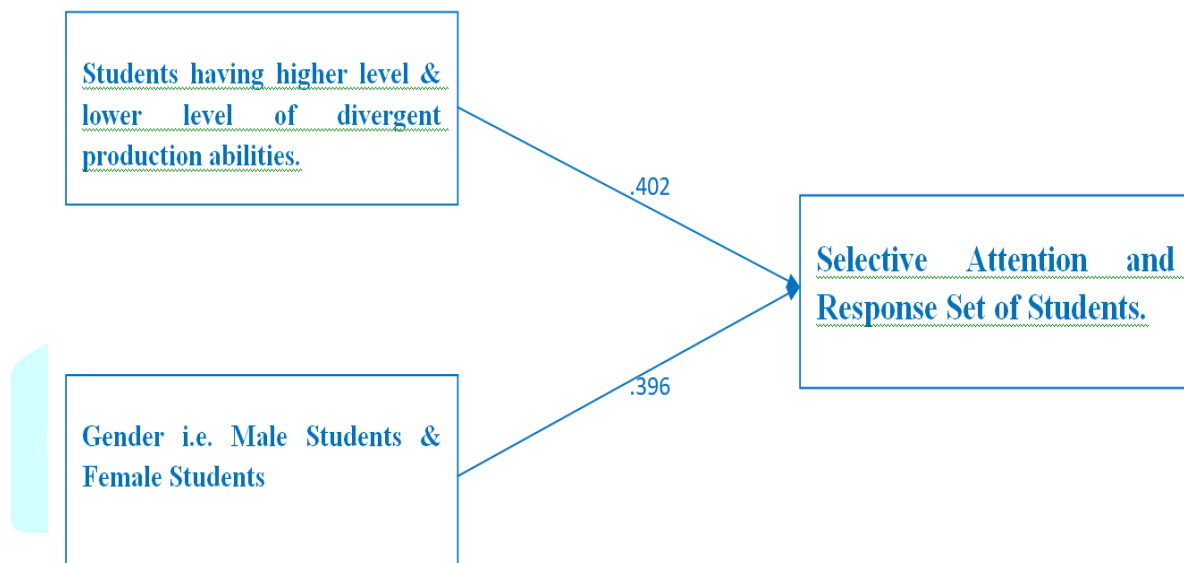
In the final model all two predictor variables (Students having higher level and students having lower level of divergent production abilities. with Gender i.e. Boys & Girls) were statistically significant on selective attention and response set of students, with Divergent Production Abilities with Gender recording a higher Beta value ($\beta = .402$, $p < .001$) than the Gender i.e. Boys & Girls ($\beta = .396$ $p < .01$).

Thus it is concluded that the Divergent Production Abilities highly affect on selective attention and response set of students than Gender.

Results are concordance with study of Divergent Reasoning (DR) undertakings are quite possibly the main intermediaries of imaginative reasoning (Runco and Acar, 2012). The vast majority of the examinations in this vein tended to the factorial legitimacy of Guilford's exemplary four divergent-thinking abilities (i.e., familiarity, adaptability, elaboration, and innovation) in a few normal tests and batteries (e.g., Hargreaves and Bolton, 1972; Follman et al., 1973)

Response set enrolment contributes a lot to the impedance in the shading word Stroop task. This might be because of selective assignment of attention to qualified responses or, on the other hand, to more noteworthy restraint of distracters that are not responses. In the current article, we report two analyses that were intended to mediate between these records. In the first Experiment, enrolment was controlled on a preliminary by-preliminary premise by prompting the potential responses for every preliminary. Response time (RT) was longer for distracters that compared to a prompted, qualified response than to an ineligible one second, the distracter was prompted on a large portion of the preliminaries. Prompting the distracter diminished RTs on both incongruent and consistent preliminaries. Vincentile investigations in the two analyses uncovered that the impacts were consistent all through the whole RT conveyances. These outcomes recommend that response set impacts emerge on account of selective portion of attention to qualified responses (Lamers, M.J.M., Roelofs, A. and Rabeling-Keus, I.M. 2010).

Conclusions: -

1) **Divergent Production Abilities with Gender were statistically correlated with selective attention and response set of students.**

2) **Divergent Production Abilities is significant predictor of selective attention and response set of students.**

3) **Gender is significant predictor of selective attention and response set of students.**

4) **Divergent Production Abilities with Gender explained 29.8% of variance from each other in selective attention and response set of students.**

5) **Divergent Production Abilities highly affect on selective attention and response set of students than Gender.**

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