

Effect of Reaction Time on Motor Educability of Girl Students.

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Abstract

The present study has been an attempt to see the **role of reaction time on motor educability**. 50 school going Girls the age range between 13 to 15 years were selected from municipal cooperation school of Raipur. To assess simple reaction time **Nelson's visual reaction time method** was used. To assess motor educability of 50 school going boys were tested with the help of **Johnson Motor Educability test**. Pearson correlation reveals a **significant negative relationship** between reaction time and motor educability of adolescent Girls. It shows that decrease in reaction time yields in increased motor educability. It was concluded that simple reaction time can predict motor educability in adolescent students.

INTRODUCTION –

Educational Psychologist Benjamin Bloom (1956) discussed three separate domains of learning, Cognitive Domain, Affective Domain, Psychomotor Domain. In Development period it is important that along with cognitive development psychomotor domain should be also taken care for development purpose.

In motor development, changes in activity can be observed through the physical progress that is called motor learning.

Motor learning, defined as “a relatively permanent change in motor behavior.

But in the process of motor learning, everyone has its own abilities and level of ease with which one can learn a new motor skill is known as Motor Educability.

The word 'Motor Educability' was introduced by McCloy (1934) and was designed as an ability to learn new motor skills quickly easily and correctly and gained general motor skills under a good presentation level.

Reaction to stimulus is a fundamental property of life and living organism

Research studies indicate that the total process is initiated within a fraction of second after the stimulus that causes reaction to occur.

The time taken by an individual to start reaction is known as reaction time.

Interest in the measurement of reaction time began as a result of the work of a Dutch physiologist named F.C. Bonders.

In modern concept of motor fitness reaction time has been considered as an important influencing factor to one's motor ability.

Significance of the present study-

- Reaction time is a significant parameter of responding quickly effectively to the external stimulus and this is very essential for adaptation with the environment.
- In other hand motor educability is also an important ability to learn new motor skills quickly easily and correctly and gained general motor skills under a good presentation level.
- The present study would help to understand some important aspects related with reaction time and motor educability.
- Present study will also help to see the relationship between motor educability and Reaction ability.

Objective of the study-

- The present study has been an attempt to see the ***role of reaction time on motor educability.***

Hypotheses

For the present study Co-relational Hypothesis was framed-

- There shall be a no significant relationship between Reaction Time and Motor Educability of adolescent boys.

Sample of the Study -

50 Adolescent Boys of municipal cooperation school of Raipur City were randomly selected as subjects.

Method and procedure-

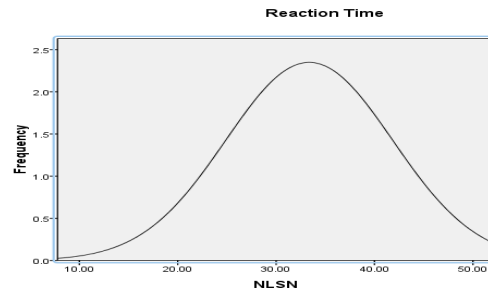
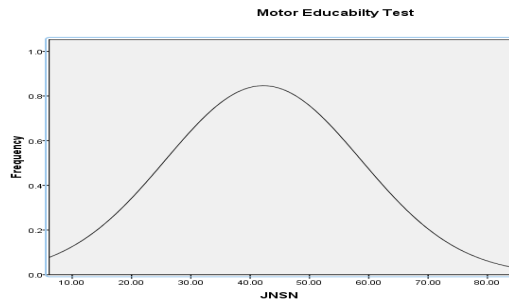
- All the subjects were randomly selected.
- First of all *Nelson's visual reaction time method*, was administrated upon the sample.
- Then motor educability test Developed by *Johnson (1992)* was administrated.

Data of Reaction Time was analyzed and categorized in **three categories**, i.e. **Q3 (High Reaction time Scorer)** and **Q1 (low Reaction Time Scorer)**, and rest treated as **average reaction** time scorer.

- **Karl Pearson product moment method** was applied to check the **correlation** between Motor Educability scores and Reaction Time scores.
- After collecting the data, **ANOVA** was applied to check **difference in the scores of Reaction Time** of high, low and Average scorer.

Analysis & Results –

Normality of data



Analysis & Results-

There shall be a no significant relationship between Reaction Time and Motor Educability of adolescent Girls.

S.No	Group	No. of Students (N)	Motor Educability (M)	Reaction Time (M)	Degree of freedom (df)	r
1.	Adolescent Boys	50	2.94	7.08	48	-.71**

Explanation-

- At 48 degree of freedom, calculated Value of r is -0.71, which is shows negative relationship between both variables.

► The co relational null hypothesis H_0 is rejected here.

Analysis of Reaction Time in three categories, i.e. Q3 of High Reaction time Scorer and Q1 of low Reaction Time Scorer, and rest treated as average reaction time scorer.

NELSN	ANOVA				
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.131	2	.065	.702	.503
Within Groups	2.881	31	.093		
Total	3.012	33			

Post-hoc analysis showing significant difference between scores of Q1 and Q3

Multiple Comparisons					
Dependent Variable: ME					
	(I) GRP	(J) GRP	Mean Difference (I-J)	Std. Error	Sig.
LSD	Q1	Q3	-.059	.136	.671
		REST	-.147	.126	.254
	Q3	Q1	.059	.136	.671
		REST	-.088	.126	.491
	REST	Q1	.147	.126	.254
		Q3	.088	.126	.491
Tamhane	Q1	Q3	-.059	.174	.983
		REST	-.147	.113	.528
	Q3	Q1	.059	.174	.983
		REST	-.088	.139	.903
	REST	Q1	.147	.113	.528
		Q3	.088	.139	.903

Discussion and Conclusion

- Result reveals a ***significant negative relationship*** between reaction time and motor educability of adolescent boys.
- It shows that decrease in reaction time yields in increased motor educability.
- It was concluded that simple reaction time can predict motor educability in adolescent students.

References –

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