CONSTRUCTION AND VALIDATION OF THE STUDY HABITS SCALE FOR THE SECONDARY SCHOOL STUDENTS

Deepti Sharma[*]

Abstract

Study habit is an important variable in determining success or failure in one's academic life. All the strategies and activities of the learner, which aid the learning process and directly or indirectly improves the outcomes of the learner can be referred to as "Study Habits". The aim of the present study is to develop " Study Habits Scale" for the secondary level students and to find out the factors that influence the study habits. After reviewing so many relevant literatures the investigator considered the six dimensions of study habits i.e., Management of timetable, Taking notes, Reading textbooks, Studying, Memorization and Preparing for test and exams and then the investigator constructed 96 items based on these dimensions. For ensuring the content and face validity of the scale investigator consulted 15 experts from the field of Education and Psychology. After the expert's judgment, 19 items were rejected and some of the items were modified according to their valuable suggestions thus 77 items were selected for preliminary try-out of the scale. In order to ensure the communication effectiveness of the scale, the preliminary try-out was carried out on a purposive sample of 50 students (25 males and 25 females) selected from the secondary schools of Aligarh city, in this process 3 items were also deleted as they were found ambiguous to most of the students. The final draft of the scale with 74 items was administered over a sample of 200 secondary school students (100 male and 100 females) selected from the secondary schools of Aligarh city. After final item analysis of study habits scale, 48 items were retained on the basis of the t-values, which were found to be significant at 0.01 level of significance. In order to increase the precision of the scale positive and negative

[*] **Junior Research Fellow, Department of Education, Aligarh Muslim University**

both types of items were included in the scale, out of these 48 items, 37 items are positive and 11 are negative statements. For the present scale, the Cronbach's Alpha coefficient method gave the reliability equal to 0.867 and the Split Half method gave the reliability equal to 0.830. The content validity of the scale was ensured through the judgments of the experts from the field of Education and Psychology. The Pearson's coefficient of correlation values between the subset scores and total score values were high and statistically significant which consequently ensures the construct validity of the scale.

INTRODUCTION

The word study habits come in practice by amalgamating the two different words 'study' and 'habit' which consequently produce a unique word 'study habits' with an effective meaning and secured a significant place in the word of Education. The study is a process to get knowledge and to learn, on the other hand, Habits are those activities which an individual do on a regular basis and these activities or abilities become fixed by repeated efforts. Thus those activities or deeds which purposefully carried out by students for improving their learning process or skills comes under the umbrella of study habits. **According to Crede and Kuncel (2008)** study habits can be termed as study routines or a standard procedure which an individual consistently follow in one's academic journey, in such a study routine various activities may come like frequency of studying sessions, review of subject matter, self- testing, practice of learned material and learning in an appropriate environment. Hence study habits are those techniques which students employ for their studies on regular basis even without thinking about it as these techniques have become stereotyped because of its long use or practice. It has been observed that many students fail to maintain expected academic records, in spite of having required intelligence for this one of the main affecting factors is that students do not spend much time in their study as it was argued that study habits play a significant role in students' performance in academic field **(Verma & Kumar,1999; Vyas, 2002)**. Therefore it is a very important variable in determining one's academic success and failure. Good study habits ensure the success of any individual as it encourages the students to persist in their efforts to study and aspire to their goal. There are various factors that may influence the proper development of study habits among the most important are: concentration, Motivation, sharp observation, adjustment in school and among friends, reinforcement, and networking.

Significance of the Study Habits Scale

The study is a complex process which provides the gateway to success. Therefore it should be done in a positive direction with full preparation. Healthy styles of study assist not only the individual itself but indirectly it also assist to the country by transforming the economy and establishing social justice as, Education is the only source which opens the portals of others success in one's life. Hence it is important that every student must be consistent in their study and it can only be possible by developing the appropriate study habits. Thus the study habits scale is of immense importance as the knowledge of the current status of the study habits of the students is very useful for teachers, school counselors, parents, and students too. As the information about the student's degree of study would help the teachers and school counselors in selecting the proper strategies and techniques during teaching learning process in order to help the students in a better way. Study habits scale would enable the students to become familiar with their drawbacks and strong points which would enable them to work on their weak points with the help of their strong points thus enhance their strength more and more and wiped out their drawbacks and this can only be possible when students become aware of their weak and strong points. Thus study habits play an important role in improving the academic performance of students. So the construction and validation of the study habits scale may help the teachers and parents in improving the study habits of their students.

Review of Related Literature

Hussain (2006) studied the effect of guidance services on study attitudes, study habits and academic achievement of secondary school students. It was an experimental study which concluded that guidance services had a significant positive effect on the study habits of students.

Edoh & Alutu (2012) surveyed the study habits of selected secondary school students of Egor Local Government Area in Benin City. In this study for collecting the data a standardized inventory of study habits developed by Bakare(1997) was used on fifty students selected from five private schools in Benin city. After analyzing the data in this study it was concluded that study habits and academic performance was highly correlated and further the difference was also found in the study habits of students which were attributed to the fact that students did not know how to study and those who managed to study did not adopt effective study methods. Thus in the

study, it was concluded that improper study habits were one of the root cause of dwindling education standard.

Chand (2013) explored the study habits of secondary school students and in this study no significant difference was found between secondary school students of nuclear and joint family on different aspects of study habits, further it was also revealed that students studying in Government schools were significantly better on home environment, planning of work and planning of subject than those of private school students. But private school students were found to be far better than Govt. schools students on preparation for exam component of study habits. But on some components of study habits i.e., reading and note taking, concentration, habit and interest and school-environment no significant difference was found between Govt. and private secondary school students.

Razia (2015) investigated the study habits of secondary school students in relation to their socio-economic status and gender. The findings of the study showed a significant difference in the study habits of students in relation to their gender as female students had better study habits than those of their male counterparts and positive correlation was also found between study habits and socio-economic status.

Edele Uju F. & Olofu Paul A.(2017) examined the study habits and its impact on secondary school students' academic performance in biology. The sample of the study constituted of 1050 senior secondary school students from the Federal Capital Territory, Abuja. The main objective of the study was to see the study habits and its impact on secondary school students' academic performance thus it aimed to ascertain the relationship between study habits and academic performance of secondary school students in Biology. The findings of the study concluded that students with the selected study area had bad study habits and further a significant relationship was found between study habits and academic performance of secondary school students.

Alavi., Lesani.,& Mahdavinia (2017). compare the study habits of two groups of students belonging to the Medical and paramedical field in relation to their achievement. Findings of the study showed a significant difference in the study habits of paramedical and medical students as the study habits of medical students was better in comparison to the other group and the study further revealed a positive significant relationship between the study habits and academic performance of students.

Dimensions of Study Habits scale

For the development of the "Study Habits Scale," the investigator identified the six dimensions of study habits with the help of related literature. These dimensions are as follows:

- **Management of Timetable -** Timetable is an organized system, used for scheduling time in a proper way. The process of formulating one's course of action is called management of timetable and generally, the motto behind this act of planning is to improve the productivity.

- **Taking Notes -** Taking notes is an effective skill which is important for every student as it assists in retaining, recalling, remembering and reciting the necessary information. It is a skill of write quickly & gets down the basic concept and use shorthand strategies which allow the students to quickly access to the information in their notes when it is needed. Adaptability in taking notes is like conquer the half battle.

- **Reading Textbooks -** Reading textbook needs active pursuit on the part of students with full concentration as they must be active and energize while reading. Books have the necessary knowledge and information, competency is required to use your skills and energy to get the relevant information from the textbook by reading them in an effective way.

- **Studying-** Studying is a process of acquiring knowledge and achieve mastery in the subject matter. It is a planned programme for developing habits and attitudes to study, to make the skills perfect, for solving problems, making judgments and creating new ideas.

- **Memorization-** Memorization is a mental activity deliberately taken by any individual in order to remember necessary information in one's life. There are various strategies which assist in memorization like techniques of mnemonics (a type of memory aid), part and whole technique, doing rehearsal or practice after a short period of time, relating new material with previous ones and chunking. Thus the students must be aware of all these strategies for improving their memorization.

- **Preparing for test and exams-** Tests and exams are specially designed tools for assessing the student's performance. Preparing for test and exam is an important step as it motivates the students to study. Schools must encourage the students for preparing test and exams by providing significant stimulus in the form of necessary guidance (coaching), grades(reward), and appreciation.

Method and Procedure

Development of scale is a technical area of research and it is based on the theory of psychometrics. A scale is an instrument for measuring one's subjective attitudes, for this, there are two major types of scales; Likert scale and Thurstone scale which are generally used to collect the subjective information in a very objective way. In the development of Study Habits Scale, the investigator has used the five-point Likert scale technique. Likert (1932) developed a method for the construction of the attitude scale. **According to Singh(2012)**, Likert scale method is simpler than Thurston's method of Equal-Appearing intervals. He further stated that " statements on the Likert scale are worded positively or negatively and subsequently, numerical weights are assigned to them. Subsequently, they are summed to yield a total score. The high total score indicates favorable attitude and low total score indicates unfavorable attitude" (**Singh,2012,pp.331).**

Planning and Writing of the statements

In order to develop indicators of study habits investigator went through with the different journal, related books, reports, newspapers and previously related tools were also consulted. After reviewing the extensive related literature the investigator constructed the statements with due care that each item should be associated with the dimensions as chosen for the study habits scale. In order to cover the all six dimensions of study habits investigator constructed 96 items.

Expert consultation

Over the 96 items of study habits, expert opinion was undertaken. The first draft of the study habits scale was discussed with the fifteen experts from the field of Education and Psychology. After the expert's valuable suggestion nineteen item were rejected as they were found to be ambiguous and some of the items were restructured and a draft of 77 items was prepared for a preliminary try out.

Preliminary try-out of the scale

The preliminary draft consisted of 77 items in the scale. In order to ensure the communication effectiveness of the scale, the preliminary try-out was carried out on a purposive sample of 50 students (25 males and 25 females) selected from the secondary schools of Aligarh city. The students were free to respond to each item and discuss if they feel any problem. In this process as per the expert's suggestions, items were subjected to certain modification and improvement whatever necessary. Thus the researcher did not retain those items which received more rejection therefore 3 items were also deleted as they were found ambiguous to most of the students.

Final try-out of the scale

The final draft of the scale with 74 items, was administered on a sample of 200 students, selected through Simple Random Sampling technique. The sample was comprised of 100 girls and 100 boys of secondary school from A.M.U Girls High school and A.M.U City High School of Aligarh city respectively. For collecting the data investigator personally approached all the secondary school students from the selected schools and requested them to answer all the 74 items on this scale.

Item Analysis of the scale

After completing the final try-out the next step is item analysis, for this the investigator assigned numerical values to each statement of every student according to the scoring pattern, and from this process, every student got a total score. On the basis of these total score, investigator arranged all the sheets of the respondent in descending order. Then the investigator selected the upper 25 percent respondents with the highest total scores and the lower 25 percent of the respondents with the lowest scores thus these two groups worked as a criterion groups in terms of which the investigator evaluated the individual statements. For evaluating the responses of both high and low group t-ratio was calculated for every individual statement using the following formula:

$$t = \frac{\overline{X_H} + \overline{X_L}}{\sqrt{\dfrac{S_H^2}{n_H} + \dfrac{S_L^2}{n_L}}}$$

Where,

X_H = the mean score on a given statement for the high group.

X_L = the mean score on the same statement for the low group.

S_H^2 = the variance of the distribution of responses of the high group to the statement.

S_L^2 = the variance of the distribution of responses of the low group to the statement.

n_H = the number of the subjects in the high group

n_L = the number of the subjects in the low group

Here we have selected the same percentage of the total number of subjects for the high and low groups, i.e. $n_H = n_L = n$.

Thus the formula can be re-written as

$$t = \frac{\overline{X_H} - \overline{X_L}}{\sqrt{\dfrac{\sum(X_H - X_H)^2 + \sum(X_L - X_L)^2}{n(n-1)}}}$$

Where

$$\sum(X_H - X_H)^2 = \sum X_H^2 - \frac{(\sum X_H)^2}{n}$$

$$\sum(X_L - X_L)^2 = \sum X_L^2 - \frac{(\sum X_L)^2}{n}$$

(Edward, 1957)

By using this formula the investigator got the t-value for each statement of the scale, t-value is a measure of the extent to which a given item discriminates between the high and low groups. t-values equal to greater than the tabulated value (t = 2.58 at 0.01 level of significance) indicating that average response of the upper and lower groups to a statement differs significantly(Edward, 1957). Then the investigator arranged all the t-values of the statements in a rank order and selected those items which were having the t-value equal to or greater than 2.58. The t-value of each item is given in the **Table-1.1**

Table(1.1) showing accepted and rejected items.

The items which were not significant, have been rejected and the remaining significant items were arranged in descending order.

Dimension	Items and its corresponding numbers	t value	Level of significant	Accepted or Rejected
. **Management of time table**	1	5.27	0.01	Ac
	2	4.08	0.01	Ac
	3	2.69	0.01	Ac
	4	2.35	0.01	RJ
	5	4.01	0.01	Ac
	6	6.15	0.01	Ac
	7	1.96	0.01	RJ

	8	3.38	0.01	Ac
	9	3.26	0.01	Ac
	10	4.02	0.01	Ac
	11	1.99	0.01	Rj
	39	5.32	0.01	Ac
2. Taking notes	12	5.19	0.01	Ac
	13	4.83	0.01	Ac
	14	3.34	0.01	Ac
	15	1.76	0.01	Rj
	16	5.78	0.01	Ac
	17	3.85	0.01	Ac
	18	5.87	0.01	Ac
	19	4.83	0.01	Ac
3.Reading text book	20	4.32	0.01	Ac
	21	2.93	0.01	Ac
	22	6.87	0.01	Ac
	23	3.84	0.01	Ac
	24	4.0	0.01	Ac
	25	6.87	0.01	Ac
	26	2.27	0.01	Rj
	27	4.68	0.01	Ac
	28	4.46	0.01	Ac
	29	4.93	0.01	Ac
	50	2.14	0.01	Rj
4.studying	30	3.59	0.01	Ac
	31	4.62	0.01	Ac

	32	1.32	0.01	Rj
	33	3.55	0.01	Ac
	34	3.85	0.01	Ac
	35	-1.23	0.01	Rj
	36	5.59	0.01	Ac
	37	2.42	0.01	Rj
	38	5.90	0.01	Ac
	40	4.14	0.01	Ac
	41	3.04	0.01	Ac
	42	5.76	0.01	Ac
	43	6.54	0.01	Ac
	44	6.51	0.01	Ac
	45	5.17	0.01	Ac
	46	5.76	0.01	Ac
	47	5.45	0.01	Ac
	48	2.06	0.01	Rj
	49	2.42	0.01	Rj
	51	2.79	0.01	Ac
	52	1.6	0.01	Rj
	62	2.29	0.01	Rj
	63	0.84	0.01	Rj
5.Memorization	53	1.45	0.01	Rj
	54	5.31	0.01	Ac
	55	4.24	0.01	Ac
	56	0.84	0.01	Rj
	57	3.71	0.01	Ac
	58	3.68	0.01	Ac
	59	2.10	0.01	Rj
	60	2.46	0.01	Rj

	61	4.43	0.01	Ac
5.Preparing for test and exam	64	0.52	0.01	Rj
	65	4.20	0.01	Ac
	66	5.45	0.01	Ac
	67	0.79	0.01	Rj
	68	0.23	0.01	Rj
	69	3.34	0.01	Rj
	70	0.85	0.01	Rj
	71	2.54	0.01	Rj
	72	2.04	0.01	Rj
	73	2.59	0.01	Ac
	74	1.80	0.01	Rj

Item selection

Finally, the total selected items for the final form of scale were 48 in number. In the table. --, Rj indicates that item was rejected and Ac shows the acceptance of the item.

Scoring Procedure

Since the present scale is based on the five-point Likert scale, with the five possible answer against each item, thus the collected data were scored according to the scoring tables given in the **table-1.2** and **table-1.3.**

Table-1.2

Items	Responses and their corresponding Scores				
	Strongly Agree	Agree	Undecided	Strongly Disagree	Disagree
Positive 1,2,4,5,6,8,9,10,12,13,14,15,16,17,18,19,21 ,22,23,24,25,26,27,28,29,30,31,33,34, 35,37,38,39,41,42,43,44,45,47	5	4	3	2	1

Examples:					
Item 1- I make a time table for studying at home.					
Item 44: I revise the lesson that I have learned properly after a time gap.					

Itemss	Responses and their corresponding Scores				
	Strongly Agree	**Agree**	**Undecided**	**Strongly Disagree**	**Disagree**
Negative 3,7,8,11,20,32,36,39,40,46,48 **Examples:** **Item 8:** I go with my friends if they call me during my study time. **Item 46:** I become nervous before exams.	1	2	3	4	5

Table-1.3

Reliability of the scale

"Reliability is the degree of consistency that the instrument or procedure demonstrates: whatever it is measuring, it does so consistently"**(Best & Khan,2014, pp.289).** Thus it predicts the accuracy or the precision of the measurement and score. The reliability of the present scale was computed through the Split Half method and to check the internal consistency of the items Cronbach's Alpha was also computed. The reliability of the whole scale is as follows:

1) The split-half method gave the reliability equal to 0.830.

2) The Cronbach's Alpha coefficient method gave the reliability equal to 0.867.

Validation of the scale

According to **Anastasi (1968) "**The validity of a test concerns what the test measures and how well it does **so(pp.99)."** Thus Validity can be explained in a very specific terms like, it is that extent to which an instrument measures what it is expected to gauge. In order to determine the face validity of the scale, the scale was sent to the 15 experts in the field of Education and

Psychology. They gave their valuable suggestion based on the definition and dimensions of the study habit. The investigator rejected those items which did not get the consensus from the experts. For ensuring the content validity the investigator confirmed that the content for the present scale was taken from the authentic sources and all items were covered all the six dimensions of study habits. For computing the construct validity the investigator calculated the Pearson's coefficient of correlation values between the scores of each dimension and total scores of the scale. As it shown in the **table-1.4**.

Table:1.4

Values of coefficient of correlation between different dimensions of Study Habits scale.

Dimensions	Management of timetable	Taking notes	Reading textbook	Studying	Memorization	Preparing for test and exams	Total
Management of time table	1	.374**	.412**	.504**	.249**	.334**	.719**
Taking notes		1	.457**	.505**	.306**	.300**	.699**
Reading textbook			1	.578**	.360**	.278**	.759**
Studying				1	.427**	.393**	.872**
Memorization					1	.214**	.545**
Preparing for test and exams						1	.520**
Total							1

** Correlation is significant at the 0.01 level.(2-tailed test)

From the **table-1.4**, it is clearly evident that all the correlation values are high and statistically significant far beyond the 0.01 level of significance and thus consequently it confirms the construct validity of the scale.

Use of the Tool

The investigator envisioned the following uses of the present tool as it is of immense educational importance to the students, course writers, teachers, and counselors.

- The present tool will help in measuring the Study Habits of secondary school students.
- It provides an opportunity to assess the study habits dimension wise which will help the students to change their faulty study habits.

- Teachers and Councillors may use the present scale to identify the students with low, average and high Study habits which in turn provides an opportunity to predict the success of the students in their life.

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