

Construction and Validation of a Scale for Measuring Secondary School Tribal Students Perception towards their Curriculum

Dr. P.Kumar¹ and Dr. M. Govindan²

1. Research Scholar (Part-time), Department of Educational Psychology, Tamil Nadu Teachers Education University, Chennai
2. Former Professor & Head, Department of Educational Psychology, Tamil Nadu Teachers Education University, Chennai

Abstract

A scale to measure tribal students' perception of their curriculum is needed to understand how effectively the curriculum meets their specific needs and to identify areas of improvement. To ascertain the perception of secondary school tribal towards their curriculum a scale was developed with 34 items related to secondary school curriculum. The scale was standardized by using item analysis and finally 23 items were retained for the final study. Test-retest and content validity methods were used to estimate the reliability and validity of the scale. The utilization of this scale believed to make a valuable contribution to the academic domain especially in tribal education.

Introduction

Tribal constitute and considerable portion of population in many developing countries like India. Nevertheless, they are still lagging far behind in different walks of life, such as good health, education, employment, empowerment and more. Among these, curriculum and instruction is a crucial fundamental requirement for tribal particularly for secondary level tribal students. Basically, their culture, festivals and even their names are not reflected in the curriculum. Sriramakavacham (2020) analyzed the school curriculum and stated that in the curriculum there is no topic, no activity and no program will be interesting to the tribals. All the curriculum activities are totally languid, insipid and unattractable to the tribal learners. Analyzing the previous studies conducted on secondary school curriculum, it was found that there is no standardized tool to measure the perception of the secondary school tribal students towards their curriculum. Therefore, the investigators found that it is essential to construct a tool that could measure the perception of the secondary school tribal students towards the secondary level curriculum.

Tool construction procedure

A tool to measure tribal students' perceptions of their curriculum is needed to understand how effectively the curriculum meets their specific needs and to identify areas of improvement. It can also help educators tailor the curriculum to be more relevant, engaging and culturally appropriate, ultimately enhancing the learning experience and academic outcomes of tribal students. Further, it addresses issues like cultural mismatch and ensure equitable educational opportunities.

To ascertain the perception of secondary school tribal students towards their curriculum a scale was developed. Scales have an important function in measuring people's beliefs, opinions and attitudes (McMillan et al., 2006). In order to measure the secondary school tribal students' perception about their curriculum four-point likert scale was developed. The scale consists of 34

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items. The scale was dispatched to five professionals with expertise in tribal matters, and the adequacy and proficiency of the items were assessed. According to the evaluation of the field experts, 6 items were not found consistent and were eliminated. Following the implementation of the suggested revisions 3 items were eliminated by the linguistic experts and the pilot study was processed with 25 items.

Pilot testing

Pilot testing is a fundamental stage of the research process. It can help identify design issues and evaluate study's feasibility, practicability, resources, time and cost before the main research is conducted. Porta (2008) defined pilot study is a "small-scale test of the methods and procedures to be used on a large scale". In order to perfect the tool a pilot study was conducted among 110 respondents. The 110 tools administered in the pilot study were scored and analyzed in descending order of the total score and separating the lowest and highest 27% (30 samples each) of the total sample. The lowest 27% named as lower group and the highest 27% named as higher group. Then they were subjected to item analysis.

Item analysis

There are 25 items in the draft tool. Each item in the tool is scored on a 4-point Likert scale measured as 1 for (strongly agree), 2 for (agree), 3 for (disagree), and 4 for (strongly disagree). The Mean and SD scores for each item was calculated separately for the lower and higher group then the t value for each item was calculated separately for the lower and higher group. Then, the 't' value for each item was calculated by using the following formula.

$$t = \frac{M_1 - M_2}{\sqrt{(SD_1^2/N_1) + (SD_2^2/N_2)}}$$

M_1 - Mean for the first group

M_2 - Mean for the second group

SD_1 - SD for the first group

SD_2 - SD for the second group

N_1 - Size of sample of the first group

N_2 - Size of sample of the second group

Computed 't' value for each item is presented in table 1.

Table 1

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't' value for Each Item

S.No of the item	Statements	't' value	Remarks
1	Separate curriculum should be developed for tribal students	2.84	Selected
2	Present school curriculum makes the students to understand the social – economic development of the tribes.	3.73	Selected
3	Provisions are available in the school curriculum for developing the tribal languages.	2.45	Selected
4	State curriculum cater the needs of the students	2.80	Selected
5	The school curriculum integrates the cultural values of the tribes	2.26	Selected
6	The school curriculum presence the heritage of the tribes	3.14	Selected
7	The school curriculum reflects the sovereignty of the tribes.	3.75	Selected
8	The school curriculum integrates the values and identity of the tribes.	3.48	Selected
9	Life skills, employability skills, and vocational training aspects are available in the school curriculum.	2.80	Selected
10	The school curriculum contains the development of tribal orthography	1.95	Rejected
11	Contents related to tribal groups rights and dignity are available in the school curriculum.	2.30	Selected
12	The important tribal occupations of agriculture, hunting, honey collecting are available to the school curriculum.	2.42	Selected
13	The textbooks and curriculum contains the local knowledge of the tribes.	2.82	Selected
14	Salient features of festivals and celebrities are available in the school curriculum.	3.21	Selected
15	The school curriculums elaborates how the natural resources and minerals that are available in the hills	3.10	Selected
16	Using the tribal dialect as a medium to transact the State curriculum	2.78	Selected
17	The school curriculum explores the tribal child innate potential.	2.68	Selected
18	The school curriculum made provisions in the teaching learning process in tribal student's mother –tongue.	3.55	Selected
19	The school curriculum connecting knowledge to life outside the school.	2.56	Selected
20	The school curriculum reveals that how the alcohol, tobacco, and drugs affects the individual, family, community, and life of the tribes.	1.84	Rejected
21	The Government provides training facilities to non-tribal teachers to work in tribal areas.	3.45	Selected
22	In tribal schools mother tongue should be the medium of instruction.	2.39	Selected
23	The teaching –learning materials are available in tribal languages	3.75	Selected
24	Teachers are available to teach both tribal languages and multi–language.	2.81	Selected
25	Provisions are available for the parents to participate in the school development activities.	3.38	Selected

Estimation of Reliability of the Tool

Reliability is consistency of measurement (Bollen, 1989) or stability of measurement over a variety of conditions in which basically the same results should be obtained (Nunnally, 1978). In order to establish the reliability of the tool, test-retest method was employed. For this purpose, the test was applied to 130 participants (80 students, 25 teachers, and 25 parents) who were randomly selected. By applying the test-retest method the co-efficient of the correlation was found to be 0.823, which is highly reliable one and the 'r' is found to be positive. The tool, therefore, is considered as highly reliable to measure the perception of students towards the secondary school curriculum.

Estimation of Validity of the Tool

The validity of the measurement procedure is the degree to which the measurement process measures the variables that it claims to measure (Gravetter and Forzano, 2012). Bollen (1989) defined content validity as "a quantitative type of validity where the domain of the concept is made clear and the analyst judges whether the measures fully represents the domain". In order to estimate the validity of the tool, content validity method was employed. The constructed tool was handed over to a panel of curriculum experts, teachers and students of different schools to ascertain the validity of the tool. Experts validated the item in terms of clarity of the items, length and complexity of the items, relevance and suitability of the items. The panel members had gone through the tool and gave their suggestions and opinion in order to refine the tool to measure the tribal students' perception towards the secondary school curriculum. Based on the perception and suggestions some of the items were slightly modified for clarity.

Finalization of the Tool

For the final tool, the items with the 't' value less than 1.96 were rejected and the items above 1.96 were selected. Two items were rejected based on this, and 23 items were selected for the final tool.

Translation of the Tool in the Regional Language

The medium of the instruction of the selected tribal schools are Tamil. Hence, the investigator translated the tool into Tamil. The translated tool was given to the language experts for validation. They were asked to critically examine the tool, keeping in the mind the aspects like the meaning of the items, the suitability of the words. Then, the investigator modified the translated item as per the suggestions of the experts.

Norms for the Tool

Score Range	Interpretation
Upto 30	Low level of perception
31-61	Average level of perception
62-92	High level of perception

Conclusion

Developing a tool to measure tribal students' perception of their curriculum is crucial for ensuring that education is relevant, engaging and equitable for the marginalized tribal students. By understanding their perceptions, educators can create a more positive, effective learning environment that support their academic success and empowers them to strive. The utilization of this tool is believed to make a valuable contribution to the academic domain.

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