Scaling Citizenship Cognitive Competency among Secondary School Students

Muhammed Asaraf P.¹, Abdul Gafoor K.²
¹(Research Scholar, Department of Education, University of Calicut) ²(Associate Professor, Department of Education, University of Calicut)

Abstract: Present day civics instructional practices yearn for a revival but suffer from the lack of adequate measures and instructional techniques. This study aims to develop and validate a scale for measuring Citizenship cognitive competency. Eleven skills were identified through the literature review and a scale was prepared with 22 items, two for each skill. All items were proved to possess discrimination power through conventional item analysis procedure. The validity and reliability estimates were done. Factor Analysis of scores collected from a sample of 421 secondary school students of Kerala helped to arrive at two components of the competency viz. 1. Cognitive skills in dealing with civic information 2. Cognitive skills in dealing with civic engagement issues. The measure of cognitive competency moderately correlated with indices of Achievement in Civics (r=0.45). Girls have a significant advantage in the total Citizenship Cognitive Skills and it’s two components.

Keywords: Citizenship, Civics, Democracy, Secondary Schools, Social Studies Curriculum.

I. Introduction

Education aims primely at fostering good citizenship qualities in students. Effective citizenship education would prepare young people in three areas: civic skills, civic virtues and civically engaged behaviours. It is more than mere academic knowledge and skills. Better civic programmes in schools would aim to develop the will and thrill for service to human society so that the evils of social world can be eradicated. There is consensus among social studies educators that education for citizenship is the primary concern of social studies in schools (Shaver, 1977). Social studies aim to bring the pupil out of the selfish cover into social world, pouring good qualities of citizenship. Too often civics education in schools is sterile and removed from real issues. It is designed to teach ‘about’ democracy, not to practice it. Studies show that classroom practices are less important than school culture and classroom climate in effecting citizenship competencies. Students need to see and experience democracy in their schools. Teacher education programmes, educational systems and high stakes tests should recognize this fact (Sears; Perry 2000).

Though the schools serve as the chief political socializing agents, school textbooks fail to contribute to the increase of political awareness of the students (EhsanulHaq, 1981). A national survey in America by the national science foundation found that ninety percent of Social Studies teachers in U.S rely on textbooks as the central instrument of instruction. Over 50 percent of the teachers surveyed prefer to continue using books they are familiar with (Weiss, 1977; Superka, Hawke and Morrissett 1980). Few teachers were aware of newer, alternative instructional material although about one-quarter reported that out-of-date teaching materials were a major problem (Shaver, Davis and Helbun, 1979). Consequently, Children often find the social studies a crashing bore as instructional process devoid of its natural vitality (Patterson, 1965).

India, it is often observed, has been rich in individuals but poor in corporate life. There is a criticism that educational system has failed miserably in providing politically relevant education. It fails in enabling the young to understand the political interest and participate efficaciously in the governance of the country so that the roots of democracy may get strengthened (Uma Varshey, 1983). India lags behind in the area of civics education and longs for a rejuvenation. But the reviving attempts turn futile owing to invalid instructional techniques and unreliable measures. The teaching of social studies is not up to the mark in terms of techniques adopted and examinations conducted (Narayana swamy cited by NCERT, 1991). The curriculums of CBSE and state run schools envision to realize Continuous and Comprehensive Evaluation covering all aspects of child including critical thinking, creative thinking, interpersonal relations and effective communication. How these are to be evaluated? Advocating teachers to use checklists, observation, anecdotal records and portfolios for this purpose without providing them with specific devices will not help the cause of assessing and supporting these virtues in students. School practices smear assessment procedures to cry aloud to boost the test scores. Hence it is inevitable to develop appropriate measures in the field of citizenship education.
1.1 Objectives of the study

The present study is an attempt to develop and validate a scale for measuring Citizenship Cognitive Competency. As part of validating the new measure, this study also examines the relationship between Cognitive level Citizenship competency and the Knowledge level citizenship competency. The gender wise difference in the Citizenship Cognitive Competency is explored too.

1.2 Definition of Key Terms

Marshall (1950) defines citizenship as a status bestowed on those who are full members of a community. This legal definition is very narrow in the context of school education. The Citizenship Education Study of the Detroit Public Schools and Wayne University (1945) remarked “Citizenship has also acquired a broad meaning almost synonymous with those desirable personal qualities which are displayed in human associations… Citizenship means the relations of the individual to his government and, in addition, his relations to other members and groups in a democratic society.

Bahrmueller and Patrick (1999) directed that four dimensions of instruction and learning can be constructed to facilitate inquiry in political education and socialization in schools: 1. Knowledge, 2. Intellectual or Cognitive skills, 3. Participatory skills, and 4. Attitudes. Citizenship Cognitive skills include the intellectual proficiencies required for a citizen in a democratic society to successfully perform the civic roles. They include the skills such as identifying and describing phenomena or events of political and civic life, analyzing and explaining phenomena or events of political and civic life, evaluating, taking and defending positions on public events and issues, making decisions on public issues, thinking critically about conditions of political and civic life and thinking constructively about how to improve political and civic life.

II. Methodology

Eleven basic citizenship cognitive skills viz. Collecting and absorbing information, Analysing events of civic life, Critical approach to information, policies and views, Evaluate validity and quality of information, Make choices, take a position, Argue, defend and reason one’s own point of view, Interpret arguments of others, Reflect one’s own actions and arguments, Civic imagination and creativity, Civic judgement and Civic assessment were identified from literature. A pool of items was prepared and on verification by the experts initially designed eleven citizenship cognitive skills were factor analys.

2.1 Sample

The draft scale was administered to a sample of 421 students (182 from Government schools, 186 from Aided schools and 53 from unaided school) randomly selected from the ninth standard of Secondary Schools of Kerala State. Schools following the state syllabus were selected. Out of the total sample, 176 are boys and 245 are girls; 286 students are from rural and 135 are from urban schools.

2.2 Procedures

The distribution of the scores in citizenship cognitive skills was near normal (M=23.28, Med.=24). The conventional item analysis proved all items to possess differentiating power with t-values ranging from 11.59 to 3.88 (p<.01). Further the validity and reliability of the test were checked through following procedures.

2.2.1 Factor structure of citizenship cognitive skills among secondary school students

Scores on initially designed eleven citizenship cognitive skills were factor analysed to arrive at a reduced number of component skills of citizenship competency (Table 1).

Table 1: Rotated component matrix showing Factor structure of Citizenship cognitive skills among secondary school students

<table>
<thead>
<tr>
<th>Constituent skills</th>
<th>Dealing with civic engagement</th>
<th>Dealing with civic information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collecting and absorbing information</td>
<td>.741</td>
<td>.706</td>
</tr>
<tr>
<td>Analysing events of civic life</td>
<td>.424</td>
<td>.496</td>
</tr>
<tr>
<td>Critical approach to information, policies</td>
<td>.614</td>
<td>.670</td>
</tr>
<tr>
<td>Evaluate validity and quality of information</td>
<td>.722</td>
<td>.608</td>
</tr>
<tr>
<td>Make choices, take a position</td>
<td>.425</td>
<td>.463</td>
</tr>
<tr>
<td>Argue, defend, reason one’s own point of view</td>
<td>.594</td>
<td></td>
</tr>
<tr>
<td>Interpret arguments of others</td>
<td>.491</td>
<td></td>
</tr>
<tr>
<td>Reflect one’s own actions and arguments</td>
<td>.706</td>
<td></td>
</tr>
<tr>
<td>Civic imagination and creativity</td>
<td>.496</td>
<td></td>
</tr>
<tr>
<td>Civic judgement</td>
<td>.425</td>
<td></td>
</tr>
<tr>
<td>Civic assessment</td>
<td>.608</td>
<td></td>
</tr>
</tbody>
</table>

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Scores on the eleven skills tend to be reduced to two factors, six skills cluster solely in a factor and four skills cluster solely in another factor. One skill is seen sharing two factors. On the analysis of underlying features of the skills it was found that the four skills clustering solely around a factor illustrate the propensity of dealing with civic information. These skills are 1. Collecting and absorbing information 2. Analysing events of civic life 3. Critical approach to information, policies 4. Evaluate validity and quality of information. The other seven skills show the propensity of dealing with issues in civic engagement or civic action. The skills involved are 1. Make choices, take a position 2. Argue, defend, and reason one's own point of view 3. Interpret arguments of others 4. Reflect one's own actions and arguments 5. Civic imagination and creativity 6. Civic judgement 7. Civic assessment. The reduction of total skills into two constituent factors also indicates that the measure using the initial eleven skills as internally consistent. The factor loadings on the component Skill of dealing with civic information (ranging from .42 to .74) and on the Skill of dealing with civic engagement (ranging from .42 to .72) reveal factorial validity of the newly identified measures.

The distribution of Citizenship cognitive skills and the two components viz. dealing with civic information and dealing with civic engagement are shown in Table. 2

**Table 2. Distribution of citizenship cognitive skills among secondary school students**

<table>
<thead>
<tr>
<th>Citizenship Cognitive Skills</th>
<th>Mean</th>
<th>Med</th>
<th>SD</th>
<th>Min.</th>
<th>Max.</th>
<th>Range</th>
<th>Sk</th>
<th>Ku</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dealing With Civic Information</td>
<td>23.28</td>
<td>24.00</td>
<td>3.94</td>
<td>12</td>
<td>32</td>
<td>20</td>
<td>-0.25</td>
<td>-0.33</td>
</tr>
<tr>
<td>Dealing With Civic Engagement</td>
<td>39.15</td>
<td>40.00</td>
<td>5.80</td>
<td>21</td>
<td>48</td>
<td>27</td>
<td>-0.72</td>
<td>-0.03</td>
</tr>
<tr>
<td>Citizenship Competency (Total)</td>
<td>68.58</td>
<td>70.00</td>
<td>9.17</td>
<td>42</td>
<td>87</td>
<td>45</td>
<td>-0.53</td>
<td>-0.24</td>
</tr>
</tbody>
</table>

The Mean and Median of Citizenship competency skills (total) are 68.58 and 70.00 respectively. Mean and Median score of skill of dealing with civic information are 23.28 and 24 respectively. Mean and Median of skill of dealing with civic engagement are 39.15 and 40.0 respectively. Distribution of total citizenship cognitive skills and the constituent components are mostly normal (Figure 1). As the ratios of Indices of Skewness to their standard errors exceed 1.96 in the total and constituent components indicates that the distributions are slightly negatively skewed (p<.05). As the ratios of indices of Kurtosis to their standard errors are less than 1.96, the distributions in the total and constituent components can be considered mesokurtic.

![Distribution of citizenship cognitive skills](image_url)
2.2. Relationship of citizenship cognitive skills with achievement in civics

Does the Cognitive level citizenship correlate positively with its counterpart, Knowledge level citizenship competency? This is investigated by correlating the total Citizenship cognitive skills and the two constituent components (viz. dealing with civic information and dealing with civic engagement) with the Achievement Test in Civics. The results are shown in Table 3.

<table>
<thead>
<tr>
<th>Citizenship cognitive skills</th>
<th>Lower Order Objectives</th>
<th>Higher Order Objectives</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dealing with civic information</td>
<td>.27**</td>
<td>.22**</td>
<td>.25**</td>
</tr>
<tr>
<td>Dealing with civic engagement</td>
<td>.39**</td>
<td>.37**</td>
<td>.41**</td>
</tr>
<tr>
<td>Citizenship cognitive competency (total)</td>
<td>.40**</td>
<td>.38**</td>
<td>.45 **</td>
</tr>
</tbody>
</table>

Coefficient of correlation of Citizenship Cognitive skills (total) with Achievement in Civics is 0.45, between Citizenship Cognitive skills (total); with Lower Order Objectives Achievement in Civics (Remembering, Understanding, and Applying) is 0.40, and that with Higher Order Objectives Achievement in Civics (Analysing, Evaluating, and Creating) is 0.38. These values demonstrate positive correlation between the two dimensions of Citizenship Competency 1. Cognitive level 2. Knowledge level. The coefficients of correlation of two components of citizenship cognitive competency viz. dealing with civic information and dealing with civic engagement also show moderate positive correlation with the Achievement in Civics (total) and the Achievement in Lower order objectives and Higher order objectives in Civics learning. The positive but moderate association that the total and components measures of Citizenship Cognitive skills hold with the Achievement in Civics against the positive and fairly high association between the component skills (Correlation of Cognitive skills Dealing with civic information with Cognitive skills in Dealing with civic actions is .49) also reflect the concept validity of the Scale of Citizenship Cognitive Skills by showing the divergence of achievement measures against cognitive skill measures.

2.2.3 Reliability of Scale of Citizenship Cognitive Skills

The total Scale of Citizenship Cognitive Skills was applied to Spearman-Brown Coefficient of correlation between forms. Two constituent factors viz. Dealing with civic information and dealing with civic engagement were applied to Cronbach’s Alpha test. The results are shown below in Table 4.

Table 4. Indices of reliability of the Scale of Citizenship cognitive skills

<table>
<thead>
<tr>
<th>Citizenship cognitive skills</th>
<th>Reliability index</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dealing with civic information</td>
<td>.53 (Cronbach alpha)</td>
</tr>
<tr>
<td>Dealing with civic engagement</td>
<td>.76 (Cronbach alpha)</td>
</tr>
<tr>
<td>Citizenship cognitive competency (total)</td>
<td>.70 (Split half reliability)</td>
</tr>
</tbody>
</table>

Split half reliability index of the total Scale of Citizenship Cognitive is 0.70 (p<.01). It indicates a high positive correlation and so the scale can be considered internally consistent. Alpha index of reliability in the component, Cognitive skills dealing with civic information is 0.53, showing that the measure of this component (with four constituent cognitive skills) is moderately reliable. Alpha index of reliability in the component, Cognitive skills dealing with civic engagement is 0.76. It shows that the measure of this component which includes seven cognitive skills is highly reliable and consistent.

2.2.4 Gender difference in citizenship cognitive skills among secondary school students

Gender wise difference in the citizenship cognitive skills was investigated through mean difference analysis. The result is shown in Table 5.

Table 5. Indices of distribution of scores in the measures of Citizenship cognitive skills (total) and components

<table>
<thead>
<tr>
<th>citizenship cognitive skills</th>
<th>Boys(N=176)</th>
<th>Girls(N=245)</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
</tr>
<tr>
<td>Cognitive skills Dealing with civic information</td>
<td>22.50</td>
<td>3.96</td>
<td>23.86</td>
</tr>
<tr>
<td>Cognitive skills in Dealing with civic engagement</td>
<td>37.30</td>
<td>6.16</td>
<td>40.50</td>
</tr>
<tr>
<td>Cognitive citizenship competency (total)</td>
<td>65.70</td>
<td>9.50</td>
<td>70.70</td>
</tr>
</tbody>
</table>

Mean scores of Girls in the case of Citizenship cognitive skills –total (70.70) is slightly but significantly higher (p<.01) than that of Boys (65.70). This trend repeats in the cases of both components viz. cognitive skills deals with civic information and dealing with civic engagement. The t-values in all three measures are significant at 0.01 level indicating a slight dominance of girls in Citizenship Cognitive Skills.

III. Conclusion

This study developed a scale to measure Citizenship Cognitive Skills and verified its validity and reliability by using Factor analysis, and other Correlational techniques including Cronbach’s Alpha and Split half reliability index. The results proved to validate the measure. Gender wise difference is also investigated with the result showing a slight dominance of girls in the scores. The measure would help to alleviate deficiency of measures in the field of Civics and
Citizenship Education. Effectiveness of innovative instructional methods, and new civic projects can be evaluated satisfactorily.

Scale of Citizenship Cognitive Skills

Muhammed Asaraf P. & Abdul Gafoor K.

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Given below are some questions on various situations in public life. Towards each situation, four methods of thinking or making decisions are provided as options. A. B. C. D. Read and evaluate the options and decide your method and mark the option in the response sheet. Respond to all questions.

1. Scaling Citizenship Cognitive Competency among Secondary School Students

2. The government is going to pass a law banning pan masala. How will you respond to it?
   a. I will study all the aspects of the law; if I find it right I will support the law.
   b. I will study about the new law.
   c. I will stand against the decision of the opposing party.
   d. I will oppose the law even if I find it right.

3. If you are a judge; how will you decide in the case of a poor man leaving his land for the need of public road, which position you would adopt?
   a. I cannot make a decision on it.
   b. I will judge as per the opinion of co-judges.
   c. I will judge considering that the person is a poor man.
   d. I will think that these problems would be solved gradually.

4. If you are an employee in a public sector company; to what extent are you satisfied with the present management?
   a. I am not satisfied with the present management.
   b. I am satisfied with the present management.

5. If you are an employer in a public sector company; how would you solve the issues of the employees?
   a. I will solve the issues of the employees.
   b. I will not solve the issues of the employees.

6. Are you a judge hearing a case of a poor man who has no property and wants to sell a piece of land in his possession to build a house for his family?
   a. I will not take a decision on it.
   b. I will make a decision on it.
   c. I will consider the opinion of the co-judges.
   d. I will judge considering that the person is a poor man.

7. Are you a judge hearing a case of a poor man who is facing difficulties in acquiring the land of a rich person?
   a. I will not take a decision on it.
   b. I will make a decision on it.
   c. I will consider the opinion of the co-judges.
   d. I will judge considering that the person is a poor man.

8. Are you a judge hearing a case of a poor man who has no property and wants to sell a piece of land in his possession to build a house for his family?
   a. I will not take a decision on it.
   b. I will make a decision on it.
   c. I will consider the opinion of the co-judges.
   d. I will judge considering that the person is a poor man.

9. Are you a judge hearing a case of a poor man who is facing difficulties in acquiring the land of a rich person?
   a. I will not take a decision on it.
   b. I will make a decision on it.
   c. I will consider the opinion of the co-judges.
   d. I will judge considering that the person is a poor man.

10. Are you a judge hearing a case of a poor man who has no property and wants to sell a piece of land in his possession to build a house for his family?
    a. I will not take a decision on it.
    b. I will make a decision on it.
    c. I will consider the opinion of the co-judges.
    d. I will judge considering that the person is a poor man.

11. Are you a judge hearing a case of a poor man who is facing difficulties in acquiring the land of a rich person?
    a. I will not take a decision on it.
    b. I will make a decision on it.
    c. I will consider the opinion of the co-judges.
    d. I will judge considering that the person is a poor man.

12. Are you a judge hearing a case of a poor man who has no property and wants to sell a piece of land in his possession to build a house for his family?
    a. I will not take a decision on it.
    b. I will make a decision on it.
    c. I will consider the opinion of the co-judges.
    d. I will judge considering that the person is a poor man.

13. Are you a judge hearing a case of a poor man who is facing difficulties in acquiring the land of a rich person?
    a. I will not take a decision on it.
    b. I will make a decision on it.
    c. I will consider the opinion of the co-judges.
    d. I will judge considering that the person is a poor man.

14. Are you a judge hearing a case of a poor man who has no property and wants to sell a piece of land in his possession to build a house for his family?
    a. I will not take a decision on it.
    b. I will make a decision on it.
    c. I will consider the opinion of the co-judges.
    d. I will judge considering that the person is a poor man.

15. Are you a judge hearing a case of a poor man who is facing difficulties in acquiring the land of a rich person?
    a. I will not take a decision on it.
    b. I will make a decision on it.
    c. I will consider the opinion of the co-judges.
    d. I will judge considering that the person is a poor man.

16. Are you a judge hearing a case of a poor man who has no property and wants to sell a piece of land in his possession to build a house for his family?
    a. I will not take a decision on it.
    b. I will make a decision on it.
    c. I will consider the opinion of the co-judges.
    d. I will judge considering that the person is a poor man.

17. Are you a judge hearing a case of a poor man who is facing difficulties in acquiring the land of a rich person?
    a. I will not take a decision on it.
    b. I will make a decision on it.
    c. I will consider the opinion of the co-judges.
    d. I will judge considering that the person is a poor man.

18. Are you a judge hearing a case of a poor man who has no property and wants to sell a piece of land in his possession to build a house for his family?
    a. I will not take a decision on it.
    b. I will make a decision on it.
    c. I will consider the opinion of the co-judges.
    d. I will judge considering that the person is a poor man.

19. Are you a judge hearing a case of a poor man who is facing difficulties in acquiring the land of a rich person?
    a. I will not take a decision on it.
    b. I will make a decision on it.
    c. I will consider the opinion of the co-judges.
    d. I will judge considering that the person is a poor man.

20. Are you a judge hearing a case of a poor man who has no property and wants to sell a piece of land in his possession to build a house for his family?
    a. I will not take a decision on it.
    b. I will make a decision on it.
    c. I will consider the opinion of the co-judges.
    d. I will judge considering that the person is a poor man.
References


