Scaling Citizenship Cognitive Competency among Secondary School Students

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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 in 1960 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.

Bahmueller 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 twenty-two items, two for each skill were selected. Each item consisted of a question stem asking how he/she thinks while facing a civic life situation. Four options, representing gradation of the cognitive skill were provided of which the students were to select one. Scale is appended.

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

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

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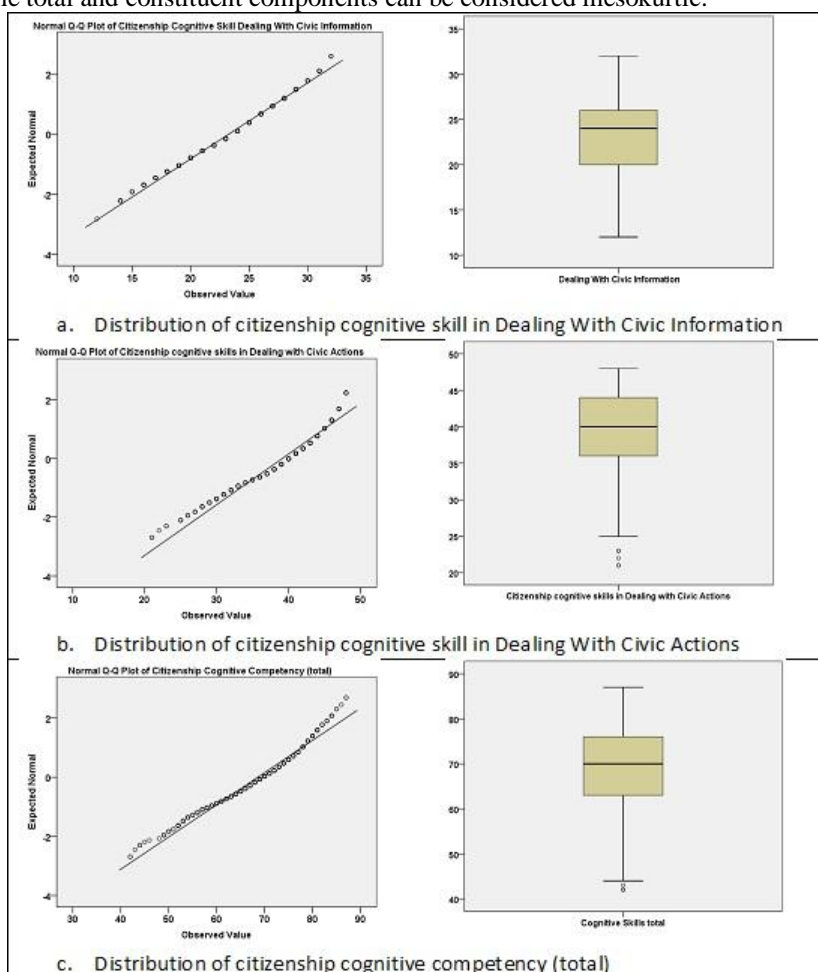
The distribution of Citizenship cognitive skills and the two components viz. dealing with civic information and dealing with civic engagement are shown in Table. 2

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

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

$SE_{sk} = .12$ $SE_{ku} = .24$

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.

a. Distribution of citizenship cognitive skill in Dealing With Civic Information

b. Distribution of citizenship cognitive skill in Dealing With Civic Actions

c. Distribution of citizenship cognitive competency (total)

Figure 1. Distribution of scores in Citizenship cognitive skills (total) and two components

2. 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 3. Coefficient of correlation of Citizenship cognitive skills with Achievement in Civics

Citizenship cognitive skills	Area of Achievement in Civics		
	Lower Order Objectives	Higher Order Objectives	Total
Dealing with civic information	.27**	.22**	.28**
Dealing with civic engagement	.39**	.37**	.44**
Citizenship cognitive competency (total)	.40**	.38**	.45 **

**p<.01; N=421

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 construct 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

Citizenship cognitive skills	Reliability index
Dealing with civic information	.53(Cronbach alpha)
Dealing with civic engagement	.76(Cronbach alpha)
Cognitive citizenship competency (total)	.70 (Split half reliability)

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 Talbe 5.

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

citizenship cognitive skills	Boys (N=176)		Girls (N=245)		t-value
	M	SD	M	SD	
Cognitive skills Dealing with civic information	22.50	3.96	23.86	3.83	-3.53
Cognitive skills in Dealing with civic engagement	37.30	6.16	40.50	5.15	-5.63
Cognitive citizenship competency (total)	65.70	9.50	70.70	8.35	-5.60

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.

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

1. During the election times, media like newspaper, television and radio become busy with talk shows, debates and news programmes. What is your stand in analysing such election news and discussions?
a. I Listen to election details with interest.
b. I pay attention to news other than those on elections
c. I Usually do not care election matters
d. Since I have no benefit, I do not mind the election affairs

2. You are talking with your friends during leisure times. One among them turns talkative about the corruption in present day politics and government offices. How will you respond to such a situation?
a. Think that We, the children have no use of discussing such matters
b. Think that we have to discuss such serious affairs only after settling our common issues
c. I will listen to others' views even if I won't tell anything
d. I will take part actively in discussing and sharing public issues

3. You come over to read in the newspapers that government is going to enact a law banning the retail selling of cigarettes and allowing only packet selling in order to reduce consumption. Which way you will react?
a. The basis of such laws should be scientific studies about the consumption modes
b. Think that whether the packet selling would lead to increase its consumption
c. Hold that government has freedom to bring in any law
d. Think that the laws are of no use in such cases

4. You happened to hear a street talk that most of the people in India are poverty stricken. Which method you will adopt to verify it?
a. No proof or test is required to tell such matters
b. No problem in telling so generally
c. It should be examined on the basis of our experience in the countryside
d. Needs to verify the data on number of BPL families in India

5. How will you respond to teachers' instruction to suggest ways for solving problems of spoiling of water taps and wastage of water in your school?
a. I will go through various solutions; find out the best one
b. I will suggest some solution coming momentarily to my mind
c. I will consider that it would be done by the teachers
d. There is no solution for such problems

6. You decide to join some of the volunteer group such as NSS, NCC or SPC. Your family opposes it. What can you do?
a. They can't grasp what we wish
b. I will do as the family wish
c. I will explain the matters to them
d. I will present the details and convince them of my wish

7. The government is going to pass a law banning pan masala. How will you respond to it if you are one among the opposition party?
a. I will study all the aspects of law; support if I feel it right
b. I will try to study about the new law
c. I will stand as per the decision of the opposing party
d. I will oppose the law even if I feel that it is right

8. Imagine that you supported the call for preventing the employees from other states for solving the unemployment problem in our state. Later you listen to the news of sending back the people of our state from gulf countries for the same reason. How will you evaluate your previous stand?
a. Taken a decision, I will not make any change
b. No need of comparing the two situations
c. I will consider what others say on it
d. If the previous stand proved to be faulty, I will change it.

9. Beggars are very common sight in bus stands and railway stations. If you possess the authority, how will you deal this problem?
a. I will implement new programmes to eradicate poverty
b. I will rehabilitate the beggars
c. I will think that these problems would be solved gradually
d. In our highly populated country such problems cannot be solved

10. If you are a judge hearing the case of a poor man reluctant to leave his land for the need of public road, which position you would adopt?
a. I can't make a decision on it
b. I will judge as per the opinions of co-judges
c. I will judge considering that the person is a poor man
d. I will pass judgement taking into account such facts as the total properties of the person, need of acquiring the land, availability of other public roads.

11. Which facts will you consider to take a decision upon starting a crusher unit in your land?
a. I will study the effects upon the local people and the environment
b. If the local people oppose, then I will consider their problems
c. I will start the crusher unit providing jobs to the people of the locality
d. I will think to run the crusher unit at any cost

12. Your teacher reads a notice in the classroom inviting applications from the interested students for participating in a quiz programme on the Gandhi Jayanthi Day. How will you react?
a. I will not mind it as there are special students for such competitions
b. I am used not to apply for such things even if I have interest
c. I will apply even though I do not expect to win the competition
d. I will apply hopefully to win as I usually listen to public information

13. What role will you take in the discussion conducted in your classroom on the topic 'Atrocities against children'?
a. Prefer to study the matter well and participate actively
b. Will listen carefully to others' views
c. Doubt whether to discuss this issue while everyone has plenty to study
d. Such issues can't be solved through discussions

14. The headmaster elaborates on the advantages of wearing uniforms. Judge why you wear the uniform.
a. There is no benefit by the system of uniform
b. I wear it since I have to obey the school rules
c. There may be some benefits in it
d. I do evaluate the advantages of uniforms thoroughly

15. On the Reading Day, you listen to the speech by a teacher pointing out that reading is dying nowadays, especially so in the new generation. Is it right or not?
a. a survey or study is to be conducted among the students to decide it
b. No problem if the teacher says so based upon his experience
c. One can say so if he feels so
d. There is no need of proof or survey to say so

16. How will you respond if you are asked to give suggestions to solve the travelling problems of children?
a. Travelling problems can't be solved
b. The exceptional students for such affairs would think on it
c. I will think that something to be done to solve it
d. I will try to select the best solution from among discussions, strikes, memorandum etc.

17. You have decided to contribute the money you have kept for study tour into the fund for a child under treatment. Your friends oppose it. What will you do?
a. I will stick on my decision if it is proved right
b. I will try to reassess my decision
c. I will contemplate to contribute to the fund later
d. I will withdraw my earlier decision

18. How will you respond to one who opines that democratic system is the cause for the increase of corruption and violence in India?
a. People who think so have to be exiled
b. Such thoughts are antinational
c. I will tell not to oppose the democracy publicly
d. I will ask him to assess the conditions of administrative systems other than democracy

19. How will you respond if you are scolded by the teacher or any other elders for putting waste in public places?
a. I will feel repentance and decide not to repeat
b. I will try not to repeat it
c. I will think such things are done by everyone
d. Think that whether those who advise are flawless

20. What will be your response if your school club decides to clean the school campus and the surrounding areas?
a. useless to do so; things will not go better
b. School can be made clean; but the surrounding area is out of our control
c. It is right to think to clean school first; and then the surrounding areas
d. I will take part actively to make the programme successful

21. Assess whether it is right to entice people to vote by giving money?
a. It is wrong as it is against democratic system
b. May be right to some extent as the voter gets at least some money
c. The voter has to decide whether is right or not
d. I can't take a decision in this matter

22. Some people are against your decision to dig a bore well in your locality where there is deficiency of water. How will you respond to them?
a. There are some people who oppose everything. I will neglect them
b. I will not reflect much since there is deficiency of water
c. I will dig the bore well as well as try to study the problems of people
d. I will think of some other solutions. If I didn't get any solution I will dig the bore well.

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