

Teaching Economics in Schools in India: Issues, Controversies and Dilemmas

Arvind Sardana | arvindewas@gmail.com

Arvind Sardana is a part of the social science team at Eklavya. He has been a member of author teams at NCERT for Social and Political Life, and Economics at the high school level. He was closely associated with various state governments such as those of Chhattisgarh, Telangana and Bihar in the field of curricular reforms.

Key Words: Thematic approach, Interdisciplinary perspective, Ethical issues, Mathematical precision, Economic citizenship, Liberal Arts perspective

Abstract

In this paper, I will attempt to argue that ordinary language can be used to explain concepts in economics. Between Classes 6-10, an interdisciplinary perspective and a grounding in ethical issues is essential. The pedagogy of economics is enriched when it is rooted in ordinary language that allows for engagement with ideas and perspectives. Ethical questions should be a part of the discussion as they are often the motivating force for inquiry and essential to the discipline of economics.

Economics as a formal subject is introduced at the higher secondary level in school. At this point, it should be taught from a liberal arts point of view. Although formal mathematical language is required for precision in the field of Economics, it can come later, in college. In school, the economics course should not be seen as an introductory course for higher level economics, but as a course in economic citizenship.

The Experience of Interdisciplinary Teams and the Use of Ordinary Language for Social Science

Economics is taught in schools at two levels. Some themes in economics are covered as part of Social Science in Classes 6-10, and Economics as an independent subject is taught at the higher secondary level.

If there is one experience that strikes me as significant, it was the opportunity to work with an interdisciplinary author team at NCERT from 2005-2008, to develop the chapters for the textbooks on Social and Political life. This was a reconceptualization of what was earlier called 'civics'. These chapters had to be developed not using an integrated approach, but one that was genuinely interdisciplinary. In an integrated approach, discipline formulation is dissolved, whereas in an interdisciplinary approach, structure is often borrowed from discipline, but a conscious attempt is made to link the themes so that there is overall cohesion. For example, the themes selected for Classes 6-8 for economics-related topics were livelihoods, markets and role of government. These had to be meshed with other themes to give a structure to the social and political life chapters.

In order to understand this better, let us examine the chapter on public utilities in the Class 8 textbook. The chapter began by defining public goods in terms of non-excludable and non-rivalrous consumption, and contrasting it with private goods. It also had a discussion on examples of production and the

distribution of these public goods. In the interdisciplinary team discussion that followed the presentation of the draft for this chapter, it was suggested that working with an intuitive notion of public facilities that children are familiar with would be a good strategy. There are many examples from the functioning of municipal corporations and panchayats that could be used to provide a real context. This would allow the students to focus on the ethical question of why the government should be involved in the supply of such public utilities and also in deciding the rules for its distribution. The principles of equity and problems of functioning were elaborated using the case study of the water situation in Chennai in which overall scarcity and unequal distribution could be examined simultaneously. This meshed easily with the overall theme of justice for Class 8 since other chapters discussed the need for a constitution, fundamental rights and duties, judicial systems & process of marginalization in society. Therefore in order to discuss the role of government for the economy in a more formal manner with definitions of private and public goods was not required at this stage.

In another chapter in the Class 8 textbook, there was a discussion on the central role of the government in regulating economic activities. This was largely done using the example of law implementation; the chapter focused on the importance of implementing existing laws as well as making new laws to protect the rights of workers, consumers and producers in the market. The Bhopal gas tragedy was discussed as an example of lack of enforcement of existing laws and the need for new laws. The idea was to discuss that markets always work within a regulatory framework of the country and its ability/inability to enforce laws. Encouraged by the interdisciplinary nature of the team, we could use an emotive example that everyone could relate to and examine controversial issues in a balanced way.

For Classes 9 and 10, there were separate teams to develop the course content for history, geography, political science and economics. It was agreed by the interdisciplinary team that economics would be presented in everyday language as a set of themes under the broad rubric of "Understanding Development". Unlike most textbooks of economics, we did not want to include an introduction to micro and macro economics. Further, we wanted the arguments to be presented in a manner in which they would be comprehensible to any high school student who was acquainted with reading and interpreting tables and simple graphs. The mathematical pre requisite was agreed upon by the team (Bose & Sardana, 2008). For example, a theme such as globalization in the chapter on understanding development would discuss the idea of greater trade opportunities in today's world; the impact of technology in facilitating production and distribution at multiple locations; and the role of MNCs in world trade.

The classroom observations showed that students could follow the arguments and relate to the case studies. In hindsight, I would like to add that although the arguments were presented in non-technical language and appeared to be pitched at a reasonable level, an interdisciplinary approach would have added greater value. Further, a connecting historical chapter to compare the process of globalization in different periods in the 20th century would have given a more nuanced view of the present phase of globalization.

With respect to a theme such as poverty, the data essentially lies in the economic domain. While this provides a broad view and backdrop to the anti-poverty programmes, what appeared to be missing in the classroom follow-up was a discussion on ethical issues. This should have been forefronted. Stereotypes such as poor people are lazy and do not wish to

work, or that poor people need to be "educated" about hygienic conditions abound. My colleague pointed out in her research study, using the feedback of classroom situations in some schools in Delhi that

Poverty as a theme harbours a large number of preconceptions and stereotypes that are at odds with disciplined forms of understanding. These prior notions are often very stubborn and require repeated questioning and sound reasoning in order to be replaced. (Bose, 2013, p. 377)

Hence ethics, discussed in ordinary language, should find a more central role in the discussion on economic ideas. Data and measurement issues require to be interwoven alongside. However, instead of following an interdisciplinary approach, the social science disciplines have more or less operated in their own silos and therefore need to talk to each other (Srinivasan, 2015).

Our experience of working in other states also indicated that a dialogue with the teachers to identify the aim of the chapters and devise small projects suitable for local areas has great potential. It energizes both the teacher and the students as it provides a stimulating way to examine the macro world. The pedagogical challenge at high school level is to imagine how from data, case studies, or local surveys, children can arrive at a macro view point that is necessarily abstract. One example of doable small projects is the survey carried out by economics teachers in a few schools in Chhattisgarh. Students were asked to gather information on the BMI status of the children in their school. This was in the context of a chapter on food security. The survey revealed alarming levels of under nutrition among high school students in the school, so much so that the surveying students & teachers

felt motivated to find ways to address the situation (Ramani & Sardana (in press)). When students do projects based on the ideas discussed in the text in non-technical language, the learning and insights gained are very different. It is evident that what is required for teaching economics at this level is:

- a thematic approach
- presenting arguments in ordinary language
- using an inter-disciplinary perspective
- foregrounding ethical issues

The NCERT as well as the departments of education at different universities that have people from different disciplines as faculty of education should create a culture of working on such themes together to create teaching-learning resources. There are many examples of such collaborations world-wide. See for instance an older textbook, "People, Places and Change", Berry & Richard (1976), authored by a team of historian and geographer. This is an introduction to world cultures for school students. It uses carefully crafted case studies to discuss the geographical location of the country, the impact of the past such as colonial history and the dilemmas & aspirations of people in relation to development.

Controversy at the Higher Secondary Level: Mathematics as a Formal Language

Economics as an independent subject is taught only in higher secondary school, in Classes 11 and 12. The syllabus covered in the NCERT Economics textbooks includes: Indian economic development, statistics for economics and introduction to micro

and macroeconomics. There has been a raging controversy around micro and macroeconomics. When these books were launched the teachers had protested, saying that these books are not useful for students and are too mathematical. Extensive use of algebraic expressions and equations was the sore point, leading to a situation where for almost a decade these NCERT books have not been used in schools. At the heart of the controversy was the use of mathematics as a formal language for economics. The academic author group responded by saying that teachers were avoiding rigour and trying to stay within their comfort zone.

This controversy was not resolved by CBSE. In fact, it issued guidelines that allowed schools to use books that were "as per NCERT syllabus". The implications of issuing these guidelines was that instead of using the new NCERT books, schools started using books by private publishers which follow the older pattern. In these private books, chapters on micro and macro economics are explained with a defined set of exercises that largely make use of geometry and simple examples. In contrast, the new NCERT books use a fair amount of algebra. Further, the new textbooks present concepts in an accurate, careful and precise manner, even though conceptually, they are a bit concise. Also, there are fewer explanations of the concepts and terms in ordinary language than expected by the teachers. On the other hand, books by private publishers use lots of examples and also focus on the questions asked in the Class 12 Board examination. This undoubtedly reinforces their content. Responding in an academic manner, NCERT organized a seminar on Economics Education in Schools. One of the important ideas suggested was to reduce the emphasis on algebra and allow the students to find meaning of the terms used relating these to everyday examples from real life. In his keynote

address on "What is the core of economics?", Amit Bhaduri highlighted the need to revisit the nature of the discipline and draw lessons for the contemporary stand-off. He was suggesting that we need to relook at the theory being taught to beginner students and select appropriately. According to him some of the things that we teach are false precision or a special case scenario. It would be better to select fewer ideas and apply them to real life situations. However, no concrete steps were initiated. The fact that CBSE by-passed this issue, calls for the need to set up a protocol between NCERT and CBSE. It is wrong that textbooks are developed by NCERT, assessment pattern are set up by the CBSE and teacher training is left to the respective school units. For any sensible classroom process, all of them need to go hand in hand. As there is no synergy between these institutions, no reform can take place.

Reasoning in Ordinary Language or the Use of Formal Mathematics for Economics?

There are strong views regarding this dilemma of the language of Economics, which emanate from how the nature of the discipline is conceived. What is economics? As Chakravarty (1986) points out, one school of thought considers economics as a pure science subject. According to this school of thought, only those with formal training in mathematics should be selected to study economics. Chakravarty, however, considers the subject as partly "engineering" and partly "reasoned history". He therefore suggests

that multiple perspectives should be accepted, and that students should be exposed to the diversity of reasoning available in economics. This becomes even more important in the Indian context since the nature of capitalist development is different in India, compared to the west. Here large number of small family farms, craft forms of production using family labour, caste & feudal relations provide a different background for economics.

These ideas were expressed in the context of university courses for economics, not for school education. If formal training in mathematics is considered essential at the school level, then only a small set of students, those who take higher mathematics at school would be able to take this course. This would be a pure science view. The alternative is a liberal arts view. This course may be seen as a meaningful introduction to contemporary economic issues. At one level, this is an attempt to expose students to economic theories to understand how they help to analyze the current economic issues faced by the Indian economy. I would favour such a view and that economics as a subject at school could be taken up by any student, whether from arts, commerce or science streams. In the above scenario the unstated assumption is that arguments expressed in ordinary language would be the basis for teaching and higher mathematics would not be an essential pre-requisite.

The liberal arts view also resonates with our expectations from our future citizens. How can they be informed and critical of the many faceted analyses offered by the media and other experts? Cambridge economist Chang (2011) strongly argues in favour of explaining economic ideas in a language that can be understood by all. He says that it is not necessary for everybody to understand the technical details in order to understand what is going on in the world. Instead, he advocates the use of what he calls "active

economic citizenship", to demand the right course of action from those who are in decision-making positions. Most of the essential principles that govern the field of economics can be explained in plain terms, and the best way to learn economic principles is to use them to understand contemporary problems that interest the reader. This view would match the courses in history, political science and sociology where understanding contemporary social & political institutions for India is a focus.

Arguing in a similar vein Bhaduri (2010, p. 8) explicitly says, "Mathematics doesn't tell you something you could not tell in words; what it does is to say the same thing far more precisely. And precision makes it easier to pinpoint differences in assumptions and conclusions that logically follow."

To be able to understand, and more importantly engage with or discuss economics, it is not essential to have studied mathematics in school. In fact, it can be a hindrance since the focus is on the math rather than the underlying ideas. The liberal arts approach emphasizes on history and the real working of institutions to discuss economic ideas. Even if we were to look at examples from science pedagogy, it is the explanation of concepts in plain terms that kindles the

spirit and explains the basics. In his book *Conceptual Physics*, Paul Hewitt (2017), argues that it is best to bring in the application of formulas later. It is the focus on understanding the ideas in ordinary language, which builds the conceptual base. Economics should look at this as a role model for teaching. Recent introductory economics books by Omkarnath (2013), Dasgupta (2007), and The Core Team (2017) should encourage us towards alternative conceptualizations of economics for school students. It is a mistaken notion to consider that writing in plain language cannot be intellectually challenging and analytically rigorous. The present CBSE syllabus for Class 11-12 falls between two stools. Indian Economic Development & Statistics for economics books are closely related to a liberal arts approach, whereas Introduction to micro and macro Economics follow the rigorous mathematical approach. To summarize, for school students, economics is best explained in ordinary language and with reference to problems of the real world. Mathematics for precision can come at the college level. In this way, there will be motivation, imagination and excitement with regard to the subject. The study of economics in school should not be linked to whether the students will later study economics in college. This should be seen in a larger context as a course in economic citizenship.

References

Berry, Leonard, & Richard, Ford B.(1976).*People, places and change: An introduction to world cultures*. New York: Holt, Rinehart and Winston.

Bhaduri, Amit. (2010).*What is the core of economics?* Bhopal: Eklavya.

Bose, S. (2013).Teaching poverty: A poverty of perspective. *International Journal of Pluralism and Economics Education*, 4(4), 371-386.

Bose,S., & Sardana, A. (2008).Teaching economics in schools. *Economic & Political Weekly*, 43(32),54-60.

Chakravarty, Sukhamoy. (1986). The teaching of Economics in India. *Economic & Political Weekly*, 21(27), 1165-1168.

Chang, Ha-Joon. (2011). *23 things they don't tell you about capitalism*. London: Penguin.

The Core Team.(2017). *The economy: Economics for a changing world*. Oxford: Oxford University Press.

Dasgupta, P. (2007). *Economics: A very short introduction*. New York: Oxford University Press.

Hewitt, Paul G. (2017). *Conceptual physics*. New York: Pearson.

Omkarnath, G. (2013). *Economics: A primer for India*. New Delhi: Orient Blackswan.

Ramani, A & Sardana A, (in press). Malnutrition among high school tribal students in selected blocks in Chhattisgarh. *Journal of Indian Education*.

Srinivasan, M. V. (2015). Reforming social science curriculum in India. *Economic & Political Weekly*, 50(42), 52-58.