
Learning Outcomes in Economics: A Case Study of Linguistic Minority School

Dr. Abdul Kadir

Lect. Economics

Anglo Arabic Sr. Sec. School, Ajmeri Gate, Delhi 110006

kadirjamia@gmail.com

Abstract

This research paper is the sincere effort to understand learning outcomes of students in a linguistic minority school. This is the longitudinal investigation spread across more than one academic session. Here, investigator tries to understand parents' attentiveness towards their children; students CGPA in previous class; their language proficiency and mathematical ability as a factor affecting learning outcome in economics at senior secondary level. In addition to this, investigator also tries to know intervention of "core teaching skills" in day-to-day teaching and its impact on retention of students' learning. This study is mainly focused on Urdu medium learners.

Keywords: learning outcome in economics, core teaching skills, mathematical and language abilities

Introduction

The economic prosperity and good quality of any nation depend on the development of human resources of that nation. Teacher plays a very crucial role in developing quality human resources. D.S. Kothari rightly quoted "Destiny of India is being shaped in her classroom". Classroom is the place where a child spends most crucial period of their life. It is the place where a child learns the lessons of committed citizenship and humanity. Teacher is the entity who can be emulated by their students. It is essential for teacher to be very sensitive towards tackling the classroom problems. He must be efficient enough to deal with the problems related to classroom.

Teaching is the profession and it required certain skills to perform tasks efficiently. Singh (2009) identified them as 'core teaching skills'. These include; lesson introducing skills, questioning skills, response management and behavior regulating skills, writing board skills, communication skills, and teaching methodologies. These skills are called 'core teaching skills' because these are common for all teachers. It means every teacher from primary to higher studies expected to demonstrate these skills. There is no fixed pattern to use but a teacher need to tailor the pattern accordingly.

Learning outcome of student in every subject is affected by many facets. In Art Stream economics is assumed difficult subject due to its mathematics orientation. Number of research suggested that numerical ability, language proficiency, students' previous class CGPA and parents' attentiveness towards their children are the major determinant of learning outcome of students. Besides this it is also being felt that teaching skills and their effective use can positively influences students' academic achievement in economics. This study is merely not a cross sectional but it is a long time real classroom based research.

Quantitative skills are marked by an ability to solve numerical problems easily. People who are good at figuring out a tip are tapping into their quantitative abilities. But for some people, quantitative ability also means that they are able to separate a whole into its constituent parts more readily than others. Quantitative ability includes arriving at mathematical solutions to problems, as well as basic adding, subtracting, multiplying and dividing (Adu, et al, 2009).

Review Literature

Mathematics is deeply entwined with economics, both by history and practice. Many economists having strong mathematics background which is reflected in their professional work (Hoyt and McGoldrick, 2012). In this connection, investigator tries to assess piece of researches which are related to students' academic achievement in economics. A study was conducted with two hypotheses i.e. teacher's quality that has further attributed into three variables: teachers classroom practices, professional development and educational attainment. Second, it was also hypothesized that teacher's quality is strongly related with students' academic performance. It was found that 'active teachers' press all students to grow regardless to their background. Active teachers try to propagate and nurture higher order and critical thinking among students (Wenglinsky, 2001). Quantitative skills are very important to success in introductory economics (Ballard & Johnson, 2004). Basic Mathematics skills, gender, CGPA, stream score in SAT exams are the major determinants of students' performance in economics (Johnson and Kuennen, 2006). Students' knowledge of central tendencies, diagrams, graphs, percentage, ratio, slope of the line and basic trigonometry found strong positive correlation with academic achievement of the students in economics (Adu, et al, 2009). A study was conducted with teachers' trough distance and conventional mode and same teachers were analyzed with

respect to their use of teaching skills, effectiveness and their positive belief towards students learning. The study concluded that teachers who were prepared through face-to-face mode were having edge over who prepared distance mode. Besides this a positive correlation was established between teaching skills used in classroom and students overall performance (Aggarwal, 2012). A comparative study was conducted on 11th standard students of two schools pertaining to students' achievement, interest, problem solving and creativity. Study revealed that constructivist approach to deal with the learners have edge over traditional approach in improving achievement, interest in the economics but it does not proves useful to deal with all concepts in economics (Kapur, 2015).

Studies of both national and international levels revealed that appropriate use of teaching skills, professional development and educational attainment of teachers positively influences students' learning outcomes. Learners' language and mathematical abilities affects their performance in economics. Studies point outs that students CGPA also positively influences academic achievement of students in economics but in this study CGPA found poor correlation with academic achievement of students.

Rational Behind Study

In current scenario economics is highly relevant subject as it is related to day-to-day affairs of human lives. Children have been losing interest in economics either totally or partially due to the bad impression they have about economics or its mathematical orientation. Unavailability of quality teachers is also responsible for this poor interest of students in economics (Al-Adrin, 1984). Learners did not choose economics as career option due to multiple reasons. Therefore, it is essential to understand the factors which are behind weakening interest of students in economics, especially Urdu medium students.

Profile of the Institution and Students

This is an oldest institution which has been catering educational needs of the people of walled city since long. This institution is established during Mughal period. One Mughal Shiphsalaar (Ghaziudding) laid its stone for educating people in this area. Later on it was also known as Anglo-Arabic Delhi College. Since independence it has been offering modern education including languages Arabic, Persian and Urdu. This is the unique institution in the sense that it gives opportunity to learn in three medium of instruction at senior secondary level. Currently, around 1900 students enrolled from 6-12th standard. Recently it also opens for girls. At senior secondary level around 350 students' are studying Economics in both (Commerce and Arts) streams. Approximately 30% are studying in Urdu medium. Hindi, Urdu and English medium students sits in one class at all levels. It is very challenging for teacher to deal with them. A teacher needs to be equally efficient in three languages and subject terminologies. Majority of the student studying in this school belongs to walled city having

Urdu background. It is investigators long time observation that Urdu medium students are not equipped with essential language and mathematical skills. It was also found that Urdu medium student rarely attempt numerical questions in their answer scripts.

Objectives of the Study

1. To study basic mathematical abilities and its relations with academic achievement of students in economics at senior secondary level;
2. To study language abilities and its relations with academic achievement of students in economics at senior secondary level;
3. To evaluate relevance of 'core teaching skills' as factor of academic achievement in economics at senior secondary level.

Methodology

This study concentrated in a particular school. The population of the study consists of all students studying Economics at senior secondary level in this school in both (Commerce and Arts) streams. Students' first summative and pre-board examination and mock-test results have been used as academic achievement indicator. Ex-post facto research design is suitable to this study.

Selection of Sample

Stratified random sampling technique used for selection of sample. 80 students selected for investigation (50 from 11th and 30 from 12th standard) out of 350 students enrolled in economics in both stream at senior secondary level. About using 'core teaching skills' investigator itself identified them by studying literature and with the consultation with the experts of the subject. Investigator itself practices 'core teaching skills' at senior secondary level. Investigator has collected views of students throughout the year about teachers' approach of teaching economics. Teachers were also enquired about using 'teaching skills' at senior secondary level.

Tool Used and Data Collection

The investigator with the help of language teacher constructed a tool consisting 10 items each of Hindi, English and Urdu languages. The difficulty level was only 8th standard in each language. Investigator also constructed a quantitative ability test. The items chosen in this test were economics specific only. The concept of percentage, square root, fraction multiplication, one variable liner equation, rule of division was part of quantitative ability test.

Besides this the investigator got the feedback about using 'teaching skills' from the economics teachers teaching in the same school. Investigator got clips of writing board work done by teachers. Students also enquired about 'teaching skills' used by their economics teachers. These teaching skills consist of lesson introducing skills, questioning, response management,

behavior regulating skills, explanation and illustration skills, reinforcement skill, communication skills, writing board skills and subject knowledge. These skills are sub-divided into parts. Students' and economics teachers were enquired about using these skills in the classroom.

Analysis of Data

Karl Pearson correlation coefficient used. Quantitative and language ability test marks entered in data analysis software. Value of correlation between 1st summative examination marks and quantitative abilities of students was computed. A value of correlation also computed between language abilities of student and their 1st summative examination marks in Economics.

Results and Discussion

Quantitative abilities play an important role as academic achievement in Economics is concern. I have been taking economics since last six years I experienced that students are not good enough in quantitative abilities. When I start statistics in 11th standard students came to me with general mathematical operations (+, -, ×, ÷) related problems. It would be worth to share my recent experiences of 11th standard revision classes. An Urdu medium student asked me (why 0.5×2 not equal to 10?). We need not to be amazed by getting such questions of students. It is since Comprehensive and Continuous Evaluation (CCE) and no detention policy has been implemented in lower classes. Teachers at senior level remains in difficulty when students did not equipped with basic mathematical and language skills. A teacher needs to accommodate such responses too. In a quantitative ability test of 20 marks administered on both 11th and 12th standard together (Mean=8, SD=3.01, Max=17, Min=2).

The correlation coefficient between marks in quantitative abilities and students academic achievement was computed. The correlation results between quantitative abilities and marks obtained in 1st summative examination ($r=.577$; $p<.05$) found significant. A weak correlation ($r=0.44$) was found between language ability test and marks obtained by the students in summative examination.

Problems of Urdu Medium Students

It has been mentioned in the profile of the school and students' that approx 30% student enrolled at senior secondary level chose Urdu as a medium of instruction. Both students and teacher found themselves in trouble in the sense that they did not have sufficient material available in Urdu medium. It is being felt that our NCERT books for Economics are not sufficient enough for Urdu medium students. Explanation of various concepts is not enough in Urdu medium NCERT books. Numerical examples, graphs, diagrams, tables, tree diagrams, pictures presented in the books are not explanatory enough. The terminologies are not decipherable and are not bilingual. These are students' feedback given to me about NCERT text

book for Economics in Urdu medium. Available text book for Economics need to be overhaul with respect to its graphs presentation, subject terminologies, translation of subject Urdu terms in English, sufficient numerical problems.

Besides this Urdu medium students trapped in numbers phobia. They are so scared of number that they don't want to attempt the numerical problems. Urdu medium students did not attempts numerical problems in their examination. A test of basic mathematics was administered over Urdu medium student where not a single Urdu medium student crossed more than five marks.

Teaching skills

A surgeon requires essential skills to perform surgery. In absence of these pre-requisite skills he/she cannot perform his/her task efficiently. Same analogy is being used here regarding teaching skills and their relevance in this profession. A teacher must be aware of repertoire of teaching skills- (sets of alternative routines or procedures, all of which serve some common) for performing his/her task efficiently. No detention policy and CCE pattern implemented which causes quality erosion of education in many respects. Despite this, investigator tried to give basic mathematical concepts on the basis of previous knowledge that approach gradually proved supportive as students academic achievement is concern. Year to year qualitative improvement in academic achievement was registered. Students build a better understanding of main concepts more effectively when they are engaged to solve problems during class activities (Ganyaupfu, 2013).

Lesson Introducing Skills

If a Mandari (Juggler) is going to show his performance to its spectator and will not start it in proper way then spectators will lose interest in his play. His show might have flop. The same analogy will be applied in case of teacher. Here, teacher is Mandari and classroom children are spectator. It is very important for a teacher to link previous class/topic to current class/topic. It helps to the students for recalling their understanding related to particular class/topic. Sometime there may be possibility that particular student did not attend the previous class. Previous knowledge needs to be enquired by the teacher and a brief discussion should be held on current topic. Starting a class in this way will help to create a favorable environment for learning. The class should not start with a threat otherwise a state of readiness to learn will not emerge among children. It is personal experiences of investigator that if a class started with a positive notion then students' will take interest in classroom and teaching learning outcome will be maximize.

Questioning Skills

The ability to ask and answer questions is central to learning. For more than two thousand years (since Socrates) the questioning has been an integral part of teaching. The use of questioning skills is essential to systematic investigation in any subject area. However, using questions to assist students' investigation is a relatively new technique in schools. In past, teachers primarily questioned students to ascertain whether they were learning the book content and to see if students were paying attention. Richard L. Loughlin provide an excellent set of guidelines for the teacher who wishes to develop good questioning techniques i.e. (i) distribute questions so that all, including non-volunteers, are involved (ii) balance factual and thought-provoking questions (iii) ask both simple and exacting questions, so that the poorer students may participate and the brighter students may be extended (iv) encourage lengthy responses and sustained answers (avoid yes-no questions, questions overlaid with afterthought, fragmentary questions, and those that tug or encourage guessing (v) stimulate critical thinking bay asking: "to what extent?" "How" "Under what circumstances" "Why?" compare and contrast. Avoid: "Does anyone know? And who can tell us? Allow time for thought. Wait until five or six want to speak. Be a model of exact phrasing and coherent thinking. Encourage students to comment on the answers of classmates. Never interrupt a student who is attempting to answer nor tolerate ridicule of an honest effort. If a student asks a question, don't answer it until you have asked the class, "How would you answer that question..? Above said practices was followed and investigator registered encouraging changes in students performance of students.

Response Management Skills

Knowledge itself reside in children minds. A teacher should not try to pour knowledge into children minds but try to drawing out whatever is already exist their minds. While teacher interacting with the students in the classroom it is not necessary that all responses given by students are ninety degree true. In this situation their answers needs to be scaffold intelligibly. Answers needs not to be supply directly but cues and prompting techniques expected to be use. Responses need to be shaped in such a way that it can create critical awareness among pupils. Investigator itself personally felt that if we will try to shape students responses then they feels confident and offer themselves voluntarily participation in classroom activities.

Students' Behavior Regulating Skills

Verbal and non-verbal skills are important for teachers of any subject. Moving in the classroom (purposefully); gestures- like movements of the head, hand and body parts to arrest attention, to express emotions, to indicate shapes, all are acts expected to perform by teachers in the classroom. When the teacher wants to show emotions or to put emphasis on a particular point, changes in voice pattern is necessary to makes pupil attentive. These behavior regulating

skills are important to grab attention and meaningful interaction between teacher and students.

Use of Writing Board

In Indian context writing board is the important teaching aid in the hands of teacher. Investigator personally observed that out ten only three teachers found effective in using writing board. Effective use of writing board in classroom helps pupil to understand any concept easily. Because writing board provides concrete experiences to students instantly. A teacher needs to write in legible ways on writing board. Sentences and words should not leave incomplete. Diagrams, tables, graph needs to be arranged in systematic manner. Axes of graphs should be mentioned clearly. Make sure all learners can see the writing board clearly. Proper difference between words and line needs to be maintained. The teacher should ensure that all students viewing writings on writing board are legible to all. If your writing style is clear, confident and well-organised, you will find that your learners progress so much better with own writing skills.

Communication Skills

Communication skills are merely not necessary for teachers but for every professional. A teacher should keep in mind their students background before speaking anything in the classroom. A teacher should strive to improve his/her communication skills. Every teacher must aware the process of communication and how it can make effective and useful for their students'. Sometime local dialect of teachers makes communication ineffective because encoded message is not transmitted. Sometime voices are not loud enough to understand. A teacher needs to speak grammatically correct sentences. Flow of communication should be logical. Emphasis should be given on key points. One important experience which is worth to share here that when Hindi, English and Urdu medium students' takes class together then they required additional explanation regarding subject terminologies used.

Reflective Teaching

Teaching is an art and it does not have set notions. As every student is unique in its dispositions, innate capabilities, their learning style, their pattern of understanding, perceiving things, reacting to their environment, no readymade method will be appropriate for classroom teaching. A teacher needs not to be stick with single method of teaching. They should try alternative approaches of teaching. Students' alone cannot be blame for poor performance but by certain extent a teacher is also responsible for this pathetic situation of the students'. So, teachers are also advice to introspect their approach to deal with the class, their methods. Teachers' need to take feedback from students' and direly needs to incorporate them into their teaching-learning process.

During classroom observation it was found that students' have escaping tendencies towards numerical problems if they scare of calculations. It was decided by investigator to give them very easy calculation at the beginning for maximizing involvement of students'. Once when they will go through with the process then they tries to attempt the numerical problems. In addition to that, teacher needs to provide support to the students' who are not efficient enough as compare to other students'. A teacher needs to spend a bit of time with such identified students' who are scare of calculations to step up their confidence.

Reinforcement Skills

We generally have the notions that the concept of reinforcement can only work with children. An adult don't require any kind of reinforcement due to his or her intrinsic motivation, but it is not true. Investigator took the view of pupil teacher while in data collection found that reinforcement feedback is also essential for adult learners too. But a teacher needs to use this skills very strategically in classroom through which it can have positive effect over teaching learning outcomes.

Conclusions

- The orientation of economics as subject has been changing day by day. In current scenario it tends to be more mathematics oriented. Universities prefer the students who have mathematics background or studied mathematics at senior secondary level. It means student who don't have mathematics at senior secondary level are not preferred to given admission in B.A. (Hon.) Economics. It has not happen in other subjects of social sciences. Few universities discontinue their B.A. General programme. If student who does not have mathematics at senior school level is not eligible for doing B.A. (Hon.) in economics. This problem de-motivates the children for opting Economics at senior school level.
- It is long time observed not that students' who are good in mathematics performs better in economics. Due to implementation of C.C.E. at lower level, responsibilities of teachers have increased. A teacher needs to be more sensitized towards children requirements. A teacher should make children aware of basic mathematics used in economics before starting the class. Basic mathematics used in economics should be part of syllabus. A teacher needs to create a sort of environment in the class that children can understand the subject. Alternative strategies should be used in the classroom. A teacher must ensure pre-requisite knowledge of students before going to start the statistics and numerical.
- The text book orientation should be change. It should include more real life case studies. Real life excursion and experiences should be part of syllabus. Economics students must be given experiences of visiting real production houses, steel plants, automobile producing units, banks, share market, agriculture farm, electricity producing units, dams, medical

and engineering institutions, etc. This is my belief if these things included in the curriculum then children will be more curious to know about them.

- Text books need to be a meaningful relook at its language, graphical presentations, equations, supplementary exercises, and color variations. Certain terminologies are such which require more clarifications to the students. Both language and subject expert should be part of text book review committee. Before reviewing books, a feedback from teachers and students must be taken into account. School teachers must be consulted for reviewing text books. A supportive material should be prepared for Urdu medium students in extensive manner. A weightage should be given to Urdu medium subject teacher for reviewing Urdu medium economics text books.
- Teaching skills are important for a teacher to perform their tasks effectively. This is my long time experience with the students that effective use of 'teaching skills' by the teacher in the classroom affects academic achievement in subject positively. Lesson introducing skills, questioning strategies, response management and behavior regulating skills, writing board skill, effective communication, reflective teaching, and reinforcement skills are the set of activity which are supposed to be manifested by a teacher for effectiveness in teaching. It is also felt that these 'core teaching skills' are not merely important for economics teacher but necessary for teachers' irrespective to subject.
- There is dire need to make special arrangement for weak students for their all-round development. Teacher as an important pillar of education process needs to remain very sensitive towards children needs. A teacher needs to identify the children who have not been pacing with rest of the class. A policy of remedial classes should be adopted to get weak children at par to rest of the class. Children who are identified as weak should get special treatment in these classes. These children needs to be identified at the beginning of the session so, a sufficient time can be given to them.

References

1. Adu, E.O. et al (2009). *Quantitative Ability as Correlates of Students' Academic Achievement in Secondary School Economics in Oyo State, Nigeria*. African Research Review, Vol. 3(2), ISSN 2070-0083.
2. Classroom Experiences of Teaching Economics in (Anglo-Arabic Senior Secondary School) since 2008.
3. John W. Best, James V. Kahn, (1989). *Research in Education (Tenth Edition)*. PHI Learning Private Limited, New Delhi-110001.
4. Lewis, G., Karron (2005). *Developing Questioning Skills*, Centre for Teaching Effectiveness, The University of Texas Austin (<http://ncnewschools.org/uploads/library/0807-questioning-article.pdf>).

5. National Curriculum for Teacher Education (2009), NCTE New Delhi.
6. National Curriculum Framework (2005), NCERT, New Delhi.
7. Pathak, R.P., (2012). *Teaching Skills*. Dorling Kindersley India Pvt. Ltd, licenses of Pearson Education in South Asia.
8. Singh, L.C., (2009). *MICRO-TEACHING Theory, Research and Practice Towards Effective Teacher Competency*. H.P. Bhargava Books House 4/230 Kacheri Ghat, Agra 282004.
9. Text Book (Urdu Medium) Economics (11th and 12th standard) NCERT, New Delhi.
10. Hoyt Gail M. and KimMarie MacGoldrick (2004) *International Handbook on Teaching and Learning Economics* Edward Elgar Publishing Limited Cheltenham, London UK.
11. Johnson M. and Kuennen E. (2006) Basic Math Skills and Performance in an Introductory Statistics Course *Journal of Statistics Education* Volume 14, Number 2 (2006)
12. Kapur, K. (2015) A Study of the Effectiveness of Constructivist Approach in Teaching-Learning Economics at Senior Secondary Stage a Ph.D. Thesis submitted in DES F/O Education. Jamia Millia Islamia, New Delhi 110025, India.
13. Aggarwal A.R. (2012) A Comparative Study of Teaching Skills and Quality of Teacher Education Provided Through Conventional and Distance Mode System in India: A Ph.D. Theses submitted in IASE, F/O Education, Jamia Millia Islamia, New Delhi 110025, India.
14. Wenglinsky H. (2001) *Teacher Classroom Practices and Student Performance: How Schools Can Make a Difference*, Research Report: Educational Testing Service, Statistics and Research Division Princeton NJ 08541.