

Impact of Change of Medium of Instruction on Teaching Learning Process of Science in English at Elementary School Level

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Abstract

The purpose of this publication was to find out the Impact of change of medium of instruction on elementary school teachers, students and parents to teach Science in English. Three open ended questions were asked from the respondents regarding the problems faced by the teacher. It was found majority of the teachers, students and parents faced problems to teach and learn Science in English in the absence of prior teacher training. Descriptive research method was used to analyze the opinions of the respondents.

Keywords: English, medium of instruction, Urdu, elementary teachers, science

1. Introduction

English language is one of the most spoken and source of communication in the world. It has got the status of language Franca. It has knitted the world community into a world wide web. It is the language of science, technology, media and communication. Competence in acquisition of this language means getting connection with more resource, people communities and opportunities. It is a global phenomenon. It is capacity and need making it easy to enter into the lives of common people.

It is language of more than 1.5 billion people around the world. No other language has shown such a rapid growth and intensity of need and capacity with grasping more and more fields of knowledge (crystal, 2005). There were technological, historical, traditional and cultural variations to adopt English as medium of instruction (MOI). There may also be the reason that foreign aid agencies were only interested to support and invest in educational programs in Pakistan if the teaching is conducted in English (Mansoor,et al.,2009)

2. Importance of English

Technically speaking English grammar is easier than the other languages. It is easier to understand its sentence structure, parts of speech and phonetics and semantics. The first and the foremost reason for the spreading of English language is the colonization of the world by the British Empire. Their military might during the 18th and 19th century helped them to promote their own language. Their second reason is the industrial revolution in Europe lead by the English.

The British came to sub-continent well equipped with better technology and organized system as compared to the existing technology and system of India (Dalrymple, 2002). As the British gained political power they promulgate their own language which gave them the sense of domination. The British Empire as rulers encouraged the masses to get admission in the schools, colleges and universities where English language was the compulsory component. But they kept on imparting primary education in respective local or mother tongue (Harmer, 2006).

The English domination was not the result of their military might. Their economic might was more powerful in which language played central role and expanded the knowledge throughout the dominion of subcontinent. Their economic development began to operate worldwide supported by English as a language of communication technologies. They dominate the world with more advance, rapid, quick and cheap ways of transportation and communication like, telegraph, telephone, airplane, radio, T.V, computer, the internet, and mobile phones etc. the British Empire transformed the role of proprietorship to multinational organizations which worked under one banner with same system of communication of which English language was the source.

The business and industry grew with the transformation of marketing at the international level. The power of press and invention of movies fueled to the new heights of material achievements. The fastest ways of communication like trains, sea ships, and aero planes gave boost to their dominance may in the subcontinent but also colonized the whole world. Science and technology fostered intellectual research environment and gave rise to the scholarship.

3. Status of English as Lingua Franca

During the 20th century English rapidly became the language of communication in the world. It is spoken and understood in every part of the world. It is being adopted as the second language in many countries. People use it without being conscious of using correct English or not (Mustafa, 2005).

It is getting new versions of English like people in India mix the Hindi words with the English words

and that version is called Hinglish.

1. Use of third person without using the correct form of verb(He run very fast)
2. Interchangeable use of relative pronouns who and which(a man which, a horse who)
3. Definite and indefinite articles are omitted (he is sitting on chair)
4. Use of question tag aren't for no and no for aren't
5. More stress and dependence on the verb such as do, has etc.(he do not work, they has no book)
6. Use of singular and plurals without understanding them (word 'data' used as singular (Seidlhofer,2004).

4. What is Medium of Instruction?

The language used to communicate instructions is called medium of instruction. It means the language used for teaching- learning process. It is also called target language. Only that language is suitable as MOI in which teachers and the students can think and communicate. MOI may be mother tongue or second language; at least teachers should be well versed in all the skills (listening, speaking, reading and writing (Jenkins, 2006).

At the inception of Pakistan Urdu was declared the national language in both east and west part of Pakistan and English for the official use. With 6 major languages and 72 dialects, Pakistan is a multi-lingual, multi-cultural and multi religious society (Rehman,2000). Urdu was made national language to create harmony among the different part of the country but it created conflicts. English language as MOI could contain all the conflicts.

5. Why English was Adopted as MOI for Science Subject at Elementary Level

1. Scientific knowledge present in English
2. Language of access to science and technology
3. To meet the requirements of the present day progress
4. To compete the world
5. For the economic gains
6. Reaching and interacting with more people
7. Becoming part of global village
8. To make the nation well-equipped with the modern age
9. Instructional language of the future
10. Adopt as lingua-franca
11. Avoid internal language differences
12. Suitable for multilingual society
13. One medium of instruction
14. Easy availability of subject trainers (Mansoor, et al., 2009).

No doubt, English language has been taught as compulsory subject from class 6. Government of Pakistan encouraged the federating units to adopt the policy of using English as MOI at elementary level to teach science from the early classes. Government of Punjab adopted English as MOI in March 2010 at the elementary school level (Government of the Punjab, 2010).

6. Research Questions

1. What problems were faced by elementary school teachers to teach science after the change of MOI?
2. What were the complaints of the parents after the change of MOI regarding teaching of science at elementary level?
3. What were the complaints of the students after the change of MOI regarding teaching of science at elementary level?

7. Research Methodology

Descriptive research design was used in the study. Population is described with respect important variables. In it Major emphasis is on determining the frequency with which something occurs. (McMillan, 2000). It helps to provide answers to the questions of who, what, when, where and how associated with a particular research problem; a descriptive study cannot conclusively ascertain answers to why. It is used to obtain information concerning the current status of the phenomena and to describe "what exists" with respect to variables or conditions in a situation (Jackson, 2009).

For data collection there are number of tools and techniques but the most common are the questionnaires, interviews, checklists and various types of tests. The required data were collected through effective use of questionnaire. 4075 teachers, 2507 students and 1920 parents were purposively selected from the elementary schools of District Sialkot. Data were collected and analyzed on frequency and percentage.

8. Data Analysis

- A. Responses regarding research question No.1

What problems were faced by elementary school teachers to teach science after the change of MOI?

1. 295(7.2%) respondents said that after the change of MOI they felt it very difficult regarding teaching of science at elementary level.
2. 287 (7.0%) respondents found that syllabus for Science was very difficult for elementary level.
3. 327(8.0%) respondents said that teachers did not show the will to teach science in English. They found English difficult as MOI.
4. 221(5.4%) respondents said that there was lack of coordination between administration and the teachers to apply English as MOI.
5. 301(7.4%) respondents complained that teachers had no time for lesson planning and teach classes continuously.
6. 336(8.2%) respondents complained that change of MOI had increased work load on the teachers.
7. 267(6.6%) respondents indicated that teachers teaching Science had lack of professional qualification.
8. 369(9.1%) respondents expressed that teachers teaching Science were not provided A.V aids to make lessons more easy, elaborative and affective.
9. 331(8.1%) respondents expressed that English created communication barrier between the students and resulted decrease in interaction between the student and the teachers.
10. 206(5.1%) teachers expressed that as the students could not understand the subject matter of Science in English, they try to learn the lessons by heart.
11. 246(6.0%) respondents viewed that as the teachers had to teach science in English by explaining the meanings in Urdu then English be revert back to Urdu.
12. 291(7.1%) respondents viewed that due to lack of and continuous refresher courses teachers could not properly adopt English as MOI.
13. 286(7.0%) respondents opined that teachers having relevant professional could teach better as compared to the teachers having no relevant professional qualification.
14. 312(7.7%) respondents said that due to change of MOI they have lost support from the parents as now they could not teach their students at home.

B. Responses regarding research question No.2

What were the complaints of the parents after the change of MOI regarding teaching of science at elementary level?

1. 349 (13.9%) parents opined that they want that their children might get education in English to compete the world but they could do nothing when the medium of instruction was changed. Most of the parents were either illiterate or had improper knowledge of English to help their children in their studies.
2. 309 (12.3%) parents said that they were illiterate, they could not understand the meaning of change of MOI from Urdu to English.
3. 285(11.24%) parents said that that after the adoption of English as MOI, financial burden increased as they had to send their children to tuition for extra help. It is burden on them.
4. 298(11.9%) parents said that Urdu knowing parents helped their children in studies when the MOI was Urdu, now as they did not have command over English could not help their children..
5. 259(10.3%) parents considered that the teachers were only responsible for as the poor performance of their children in the public exams.
6. 319(12.7%) parents complained that after the change of MOI made the students indolent and they started evading the school homework. Now there was lack of interest in studies at home they felt difficulty to understand lessons in English on the part of the students.
7. 228(9.1%) parents complained that after the change of MOI students started evading school work. The children complained that as they could not understand the lessons and showed poor performance in the classroom, they had to face the punishment of the teachers.
8. 271(10.8%) parents opined that MOI be the mother tongue at least up to primary level.
9. 189 (7.5%) parents complained that due to change of MOI children were getting use to rote learning and could not show their natural abilities and felt losing their confidence.

C. Responses regarding research question No.3

What were the complaints of the students after the change of MOI regarding teaching of science at elementary level?

1. 355(18.5%) students said that after the MOI was changed they could not communicate easily with the teachers as it has badly affected the student's reading, speaking, writing skills.
2. 317 (16.5%) students opined after the MOI was changed, they could not understand the concepts and ideas and felt that perhaps they did not have capabilities.
3. 296 (15.4%) students observed that after the MOI was changed, they had pronunciation problems which were creating reading further problems.
4. 354 (18.4%) students viewed that after the change of MOI into English, they could not understand the

content matter of science.

5. 314 (16.4%) students expressed that after the change of MOI into English, they were not taught with the help of A.V aids to demonstrate scientific laws and theories.
6. 284(14.8%) students said that the burden on the students is increased due to change of MOI as now they had to understand the matter in Urdu and then learn it by heart in English.

9. Discussion

The compiled data show that subsequent to adoption of English as MOI from Urdu teacher's students and the parents faced difficulty in teaching Science in elementary classes alike. They expressed their concern over their work load had increased. They were not ready to teach Science in English continuously during the working day at school without proper lesson planning to teach science subject in English. They needed proper teacher training prior to teaching.

In the opinion of teachers, parents and the students English as MOI became more difficult as compared to Urdu as the teachers learnt the concepts and ideas in English themselves and then explain the subject matter to the student then students had to learn that matter without having proper understanding of it. Obtrusive and non-obtrusive observation showed that after the Change of MOI the listening, speaking, reading and writing of the teachers did not improve.

Lack of Communication in English decreased student-teacher interaction in the classroom and parents had no role to play as they could not understand what the effect of change of MOI was. It was also observed that due to lack of enhancement of English the confidence level among teachers decreased. Due to lack of command over English the teachers could not explain the terms and ideas properly. The students could not ask the questions regarding their problems and showed poor results in the exams.

10. Conclusions

From the above data collection the major conclusions drawn were:

1. After the change of MOI teachers felt it difficult to teach science subject in English as it had badly affected their performance.
2. Both teachers and the students found English as MOI more difficult as compared to Urdu to teach science in English..
3. After the change of MOI as the teachers could not understand the concepts and ideas of Science in English they were unable to answer the questions raised by the students.
4. Listening, reading, speaking and writing ability was badly affected after the change of MOI of both the students and the teachers.
5. Work load on both teachers and the students increased as they had to plan the lessons prior to teach science in English and they had continuous hours of teaching at the school. It had also increased the financial burden on the parents as they had to send their children to tuition.
6. Lack of funds teachers could not be provided the A.V aids.
7. Adequate teacher training was not provided to the elementary school teachers prior to the implementation of change MOI was not
8. Inadequate professional and academic qualifications were also the major problems and restraint to teach Science in English.
9. Teachers having more relevant experience were more effectively working as compared to the teachers have no relevant experience.
10. Change of MOI affected all the strata of the society regardless of the background of the students.
11. Strategic competence w of both the students and the teachers was badly affected.
12. Rote learning increased among the students.
13. At home parents could not help their children in studies after the change of MOI.
14. After adoption of English as MOI into Urdu. Self-confidence of teachers and the students had decreased.
15. Students found it difficult to follow the lectures in English which created lack of interest among the students for English as MOI.
16. Overcrowded classes with lack of use of real objects, A.V. aids, and poor communication due to change of MOI affected the learning process of the students.
17. Due to deficient classroom interaction affected the effective teaching-learning process of Science in English, which badly affected the students' results in public examination.

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