



E-ISSN: 2958-5996  
P-ISSN: 2958-5988  
<https://journal-of-social-education.org/index.php/Jorunal/issue/archive>



**Investigating Primary School Teachers' Problems in Teaching and their Learners' Abilities in Learning of Science through English as Medium of Instruction**

<b>Javed Mustafa<sup>1*</sup></b>	<b>Zafar Khan<sup>2</sup></b>
<b>Shafqatullah<sup>3</sup></b>	

<sup>1</sup> Assistant Professor, Department of Education & Research, Khushal Khan Khattak University, Karak, KPK-Pakistan.

Corresponding Author Email: [dr.javedmustafa@kkkuk.edu.pk](mailto:dr.javedmustafa@kkkuk.edu.pk)

<sup>2</sup> Assistant Professor, Institute of Education & Research, Gomal University, D. I Khan, KPK-Pakistan.

Email: [zafarkhan786@yahoo.com](mailto:zafarkhan786@yahoo.com)

<sup>3</sup> Lecturer, Department of Education & Research, Khushal Khan Khattak University, Karak, KPK-Pakistan

Email: [qushafqat@gmail.com](mailto:qushafqat@gmail.com)

## Abstract

This survey research was carried on having objectives; to know about learners' abilities in learning of science through English as medium of instructions as perceived by their teachers and to pin point problems in the implementation of English as medium of instruction at primary level. All the 314 government girls' primary schools in three tehsils of district Kohat was population of the study. Through cluster random sampling techniques the teachers of 158 schools teachers were selected as respondents of the study. Data from the respondents was collected through adopted questionnaire developed by Akhter (2018). Lack of

# Physical Education, Health and Social Sciences

## VOL-2, ISSUE -4, Oct-Dec-2024

potential on the part of students regarding covering and discussing all the contents of science, lack of interest in learning of science and no understanding and answering the questions raised in the classroom in science were major findings of the study. Similarly teachers face problems of unacceptability of using English and non-participation by students in the classroom were main problems of teachers while implementing English as medium of instructions in teaching of science at primary level. Arrangement of frequent science exhibitions for learners in schools, conduct of regular workshops for in-service teachers and ensuring at least one teacher in each school having BS in any science subjects were recommendations of the study.

**Key Words:** Primary School Teachers, learning, science, English as Medium of Instruction

### INTRODUCTION

The systematic education given to the kids at the age of five to nine (Longman, 1987) or at the age less than eleven (Saratullah, 1993) is primary education. It has unavoidable role in one's life (Zeb, 2004) and is the founding pillar in educational pyramid. Further education of children depends upon their primary level education. If at primary level learners have the capabilities of understanding and the concepts of children are clear, they will be capable to easily understand difficult odds and can apply it meaningfully in their in their future lives (Kathleen J. Roth ,2013) Shami, 2006 & Suleman, 2008). This seems to be possible, if students are potentially active for learning in the teaching learning process.

In teaching learning process, the appropriate use of a language is responsible for transfer of Knowledge and skills (Mkwizu, 2003). Language is used as a tool of instructions in the educational process and is called as medium of instructions. Medium of instruction plays a significant role in all teaching and learning environments. Understanding of instructions is the need of both teachers and students. Effective teaching and learning processes are conditioned with the understandable medium of instructions equally important for both teachers and students. Both are required to have linguistic competency in the language used as medium of instructions. Low proficiency of teachers and students regarding medium of instructions leads towards ineffective and inefficient teaching learning condition (Ibrahim, 2001).

Teachers are supposed to be competent linguistically in the

## Physical Education, Health and Social Sciences

### VOL-2, ISSUE -4, Oct-Dec-2024

language used as medium of instructions as well as pedagogically for delivering experiences effectively to the students. In the same way students are also supposed to be competent to understand and comprehend the important points of the lecture. In other words, teachers should have good reading comprehension and oral communication skills and students having listening, speaking and writing comprehension skills in the language used for medium of instructions. The most effective medium of instructions in teaching learning process is mother language that is first language (L1) of students and teachers. Instead of applying L1, second language (L2) is exercised as medium of instructions in the process of learning and teaching by teachers and learners.

L2 as medium of communication in education is mostly difficult. It imposes a heavier demand on teachers as well as students. In the second language scenario, teachers need special skills to teach a subject in a specific way. Probably majority of teachers do not get the desired pedagogical skill. Unluckily, in Pakistan, there are multiple local languages and mother languages are rarely used as medium of instructions while Urdu is L2 here in this country. Further, primary school teachers in this country usually teach several subjects including science to a specific group of learners. While despite the many drawbacks of L2, in the subjects like science, even third language (L3) i.e. English is used as medium of instructions in teaching learning process in the country. It is needed because, with the latest discoveries in science, scientific vocabulary is mostly growing in English. New terminology is fabricated that develop the language of Science (Erekson, 2002).

There is a dire need of communication skills in English for using it as medium of instructions for teaching and learning science as a subject. If the learner is able to speak, write and read the instructional language can understand science easily in a better way. Reading strengthens learners' comprehension, it enable learners to interpret, infers and reaches to the scientific conclusions (Einstein, 2002). Science education makes use of three different activities namely interpretation, knowledge transferring and discursiveness (Jones, 2000). All the three activities emphasize the importance of language. If a learner cannot express verbally or write clearly; probably the learner does not understand the concept well (Freire, 2002). In such condition there will be declining trend of pursuing the subjects related to science in high school and further

education (OECD, 2007).

In country like Pakistan, subtractive bilingual learning (Nguyen and Hamid, 2017) happens in teaching learning process of science. Most of the learners are supposed to learn science in English, but they are neither comfortable nor competent in learning science through English and their teachers also feel uneasiness in teaching science through English. Resultantly, it causes heavy loss to students in developing their conceptual understanding in science (Brock – Utne, 2000).

Together with proficiency in English, primary school teachers need to have sufficient expertise about the important and essential concepts in the discipline of science. They need to have deep understanding of science topics and know about the philosophical aspects of scientific concepts (Mizzi, 2013) so that to make their students able to understand science. Primary level for knowing science is important in the sense that the basic understanding of scientific knowledge of learners is built at their primary age level (Garcia, 2003). A research study on the use of English being L2 as a medium of instruction in post-primary education was conducted by Malekela (2003) in Tanzania. Results of her study explored that use of a foreign language as an instructional tool for teaching and learning very likely leads to low participation of students in Tanzania. It has been reported that teachers have low level of confidence in teaching of science because of their lack of subject matter knowledge, less interest and less pedagogical knowledge of science (Allen, 2006). Incompetencies of teachers in science indirectly give the notion to the learners that science is difficult and hard to learn (Leever, 2010).

### **Objectives of the Study**

1. To know learners' abilities in learning of science through English as medium of instructions as perceived by their teachers.
2. To investigate the problems of teachers in teaching of science through English as medium of instruction at primary level.

### **Research Questions**

1. What are the perceptions of teachers about learners' capabilities in learning of science through English as medium of instructions?
2. What are the problems of teachers in teaching of science using English as medium of instruction at primary level?

### **Teachers' Perception about Students' Capabilities in Understanding**

# Physical Education, Health and Social Sciences

## VOL-2, ISSUE -4, Oct-Dec-2024

### of Scientific Concepts while using English as Medium of Instruction at Primary Level.

4	Students are capable of covering all the course contents in due time while using English as medium of instruction.	109	196	24	85	22
5	Students are capable of discussing science contents in classroom while using English as medium of instruction.	135	180	17	81	23
7	Students take interest in teaching science in English as medium of instruction at primary level.	116	180	9	102	29
8	Students are capable of achieving the highest level of Bloom's taxonomy in learning while using English as medium of instruction in science at primary level.	71	240	19	89	17
10	Students at assessment level can easily understand and respond to the questions in English what they are supposed to answer.	139	182	23	68	24
11	You feel your students' general language skills meet the expectations required for teaching science in English as medium of instruction.	1	2	3	4	5
12	Students' have the aptitude to raise relevant questions in the class using English as a medium of instruction.	1	2	3	4	5
13	Students have the ability to give sufficient answer to the questions raised by the teacher using English as a medium of instruction at primary level.	1	2	3	4	5
14	Students have the capability to keep two way communications in science topics using English as a medium of instruction.	1	2	3	4	5

# Physical Education, Health and Social Sciences

## VOL-2, ISSUE -4, Oct-Dec-2024

16	At primary level students are capable to read and write the science lessons while using English as medium of instruction.	1	2	3	4	5
----	---	---	---	---	---	---

### **Problems in Implementation of English as Medium of Instruction in Teaching of Science at Primary Level**

3	There is a general problem of unacceptability of English as medium of instruction at primary level.	1	2	3	4	5
5	It is difficult for students to understand science being a non language subject while using English as medium of instruction at primary level.	1	2	3	4	5
7	There is students' motivational problem in the subject of science at Primary level while using English as medium of instruction.	1	2	3	4	5
8	There is a problem of Students participation in the subject of science using English as medium of instruction					
10	At primary level students perceive science is difficult and boring while using English as medium of instruction.	1	2	3	4	5
11	Primary level Students lose interest in learning science contents using English as medium of instruction for a long time.	1	2	3	4	5
13	There is a problem of engaging students consistency in science using English as a medium of instructions at primary level.	1	2	3	4	5
14	Students face difficulties in completing their assignments using English as a medium of instruction at primary level.	1	2	3	4	5
15	Students face problems while discussing the scientific concepts using English as a medium of instruction at primary level.	1	2	3	4	5
16	At primary level students face problems	1	2	3	4	5

raising questions while learning science in English at primary level.

### **References**

- Allen, R. (2006). Trends in Elementary Science Education. Priorities in Practice: *The essential of science, Grades K-6: Effective curriculum, Instruction and Assessment.*
- Brock-Utne, B., Desai, Z., & Qorro, M. A. (Eds.). (2003). *Language of instruction in Tanzania and South Africa* (LOITASA). E & D Limited.
- Einstein, Albert. 2002. Merging Science and Language. In: Pratt, Harold (ed.). *Using Language skills to help students learn science.* Oxford: Oxford University Press.
- Erekson, Tom. 2002. Science and communication. *The Science Teacher*, 69 (8), 39 – 41.
- Freire, Paulo. 2002. *If you teach from a textbook.* In: Pratt, Harold (ed.). *Using Language skills to help students learn science.* Oxford: Oxford University Press.
- Garcia, C. (2003). *The effects of Teacher Attitude, Experience, and Background Knowledge on the use of inquiry method teaching in the elementary classroom.* Retrieved from <http://www.nmu.edu>
- Jones, C. (2000). The role of language in the learning and teaching of science. *Good Practice in Science Teaching: What research has to say*, 88-103.
- Ibrahim, J. (2001), The implementation of EMI (English medium instruction) in Indonesian Universities: Its threats, its problems, and its Possible Solutions. *Journal of Jurusan Sastra Inggris, Fakultas, Universitas Kristen Petra* 3(2), 121-138. <http://puslit.petra.ac.id/journals/letters>.
- Leever. (2010). *Case work paper education and skill, campaign for science and engineering in UK.* Retrieved from: [Hilary@sciencecampaign.org.uk](mailto:Hilary@sciencecampaign.org.uk).
- Longman. (Ed). (1987). *Dictionary of Contemporary English*, (New Edition). England: Clays Limited. 821.
- Malekela, George, A. (2003). *English as a medium of instruction in post-primary education in Tanzania: Is it a fair policy to the learner?* In: Brock-Utne, Birgit, Desai,
- Mizzi, D. (2013). The challenges faced by science teachers when teaching outside their specific science specialism. *Acta Didactica Napocensia.*

# Physical Education, Health and Social Sciences

## VOL-2, ISSUE -4, Oct-Dec-2024

6(4), 1-4.

- Mkwizu, Mary Alphan (2003). *The pedagogical implications of using English as the Medium of instruction in teaching civics in Tanzania Secondary schools*. University of Oslo: Institute of Educational Research.
- Nguyen, T.T.T., & Hamid, M.O.(2017). Subtractive Schooling and Identity: A case Study of Ethnic Minority Students in Vietnam. *Journal of Language, Identity & Education*, 16(3), 142-156. <http://doi.org/10.1080/15348458.2017.1286990>
- OECD. (2007). Executive Summary PISA 2006: *Science Competencies for Tomorrow's World*. Paris: OECD.
- Saratullah. (1993). *The Readers' digest oxford word finder*. Oxford: Clarendon Press. p.1207.
- Shami, P. A., & Hussain, K. S. (2006). *Elementary Education in Pakistan*. Academy of Educational Planning and Management, Ministry of Education.
- Suleman, Q. (2008). *The Use and Availability of Audio Visual Aids in Teaching of Science at Primary Level in Tehsil Banda Daud Shah (Karak)*. Unpublished Master Thesis, Institute of Education & Research, Sarhad University of Science & Technology Peshawar, 2.
- Zeb, A. (2004). *Primary education in education policies and developing a strategy for universalization of primary education in Pakistan (Doctoral dissertation, AIOU)*.