

**Relationship between Teacher Interaction and Academic
Achievement of Students at Secondary Level**

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by

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**Submitted in the Partial Fulfillment of the Requirements for the
Degree of Doctor of Philosophy, in Education
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DECLARATION

It is certified that this PhD dissertation titled "Relationship between Teacher Interaction and Academic Achievement of Students at Secondary Level" comprises of original research. Its contents have not already been submitted in full or in part for the requirements of any other degree and is not currently being submitted for any other degree or qualification. To the best of my knowledge and belief, this thesis does not contain any material published or written previously by another person, except where due references are made to the source in the text of the thesis.

It is further certified that help received in preparing this thesis, and all resources used have been acknowledged at the appropriate places.

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CERTIFICATE

This is to certify that the research work described in this Ph D dissertation is the original work of the author that was carried out under my direct supervision. I have personally gone through all the data, results/contents reported in the manuscript and certify its correctness and authenticity.

I further certify that the material included in this thesis has not been used in part or full in a manuscript already submitted or in the process of submission in partial/complete fulfillment of the award of any other degree from any other institution. I also certify that the thesis has been prepared under my supervision according to the prescribed format therefore; I endorse its evaluation for the award of PhD degree through the prescribed procedure of the university.

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DEDICATION

I dedicate this research work to
my family. My parents, brother,
sisters, my wife, and children

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Abstract

Classroom is the most important place in the educational institutions. It is the focal point of all learning activities. This study was designed to investigate the interaction between teachers and students, and students to students within the classroom. This study started with the review of the literature; many studies were found which have analyzed different aspects of classroom life. A need was felt to see the relationship between teachers' verbal interaction and students' academic achievement.

The population of this study consisted of all secondary level science teachers of government high schools in Bahawalpur. A sample of 45 science teachers was purposively selected and their intact classes (405 students) were also taken as a part of the sample. The major objectives of the study were to explore the time spent on each component of verbal interaction in teaching of science through the analysis of classroom interaction at secondary level, and to find out the relationship between teacher interaction and academic achievement of students. Seven research questions about time spent in each component of interaction, relationship between interaction and academic achievement, and the effect of different types of interactions on the levels of learning of students; were formulated to address these objectives. A sixteen category observation schedule was used to analyze teacher student interaction in the classroom.

In a typical setting of the classroom there were a number of ways of interaction but the most significant among them was the teacher student interaction. Although, theoretically, teachers have a large number of teaching methodologies on their disposal but in real settings it was revealed that most of the teachers, in the sample used, typical lecture method mixed with inductive or deductive reasoning. As patterns of teaching are concerned, it was found that most of the classroom time was

devoted to talk. Most of the talk time was consumed by the teacher. Most of the talk time was spent in direct talk i.e. lecturing, questioning-answering, giving directions. Demonstrations, students' questions, acceptance of students' feelings and using the ideas of students were given less time in teacher student interaction. It was concluded that the academic achievement of the students is directly influenced by teachers' talk time devoted for one component or the other in their respective classrooms. The interaction between students and teachers was analyzed to find out different aspects according to the classroom dynamics. The correlation between teacher interaction's aspects and the academic achievement of students' was calculated.

The results of the correlations showed that lectures of the teachers enhanced students' knowledge level's academic achievement while question answers were more correlated to higher level's learning. Student-student talk other than question-answer had been negatively correlated with students' academic achievements. In the end it was concluded that it is not necessary to divide classroom time 50:50 among teacher and students but proper utilization of time is more important. Some recommendations are given in end especially for the teachers that they may be able to focus on students' higher level learning through a better interaction in their classrooms.

Chapter 1

Introduction

The interaction between teacher and student is the soul of the system of education. The environment of the classroom depends upon the interaction between the teachers and the students. It is the need of the hour that we have research based evidence about the classroom environment. According to UNDP report (2009) the development of human beings directly depends upon the quality of education they receive. Out of 175 countries of the world, Pakistan's rating order in terms of human development profile comes to 136 and adult literacy rate wise is on 124th position.

The classroom environment of the educational institutions, play a vital role in the development of their students. So as a result the quality of education directly depends on quality of teachers' interaction in their relevant classes. Inamullah, (2005) observed that students are given less time for the development of intellectual and thinking skills, active participation and interaction. The teacher seems to be in a very dominant role in the classrooms in Pakistan.

An extra ordinary ability of thinking and talking differentiates human being from other lower order organism. Our everyday life activities mostly depend upon our communication skills i.e. how we talk and how we understand others. No matter, whatever our profession is, we need to talk to communicate our ideas, thinking, liking, disliking, and asking questions to understand other people's ideas. This communication skill is far beyond the understanding of simple uttering of sound, actions of fear or joy, like animals. Human beings not only use the words to communicate but they know very well, what to say or not to say at a particular place. What will it mean to other in what situation? So we organize our speech in a manner

that looks appropriate and correct in our sense. There may be considerations about ethics, culture, social setup, and the sense of the people to whom we are going to have some conversations. So we are not meant to rely on only our verbosity but to have a sense of others perception too. This is largely our knowledge about our own abilities, knowledge of others' abilities, culture, customs, and personality; which shape our interpersonal relationships and enable us to have any kind of social interaction with each other. As Wells (2001), concludes; we interpret the talk of others, generally we count for apparent disparities between what is said and what is meant by those words. Even the words change there original meanings only by the change of tone of person talking. Some sentences are very simple even if they are read or heard out of context, they have similar meanings.

As we participate in some verbal interaction, generally we can be confident about our interpretations about others, because we have the ability to perceive the finest details of the language being used. For Example, we can differentiate the sense of words, with the change of accent, tone, pitch, stress, pausing, movement, gestures, facial expressions and the body language. We are able to decide instantly by the integration of clues coming from any source, to achieve the exact meanings of the talk. When we have the chance to talk, we choose a way to express ourselves, in accordance with the situation, our personality, and our learned ability to have correct perception about the people to whom we interact. In a given instance if we make a statement about any event in the world, or we ask any question, or answer to any one's question; we define ourselves socially, and keep in mind other's perception about us. Then we are able to argue with, confirm or challenge some one's argument. As we observe the talk of others, we perceive it in the light of our everyday knowledge about those who are involved in this conversation and this is the

knowledge which enables us to indulge in any social interaction. The beauty of the language will vanish if we are not able draw out the meanings which are actually meant but not stated. Similarly there may be words without meanings which are not clear until later in the interaction, made clear, or they need to be reinterpreted in the light of past words and action. Grice (1975) concluded with similar basis for orderly talk, but with a different disciplinary perspective. She named it as co-operative principle. It is based on the readiness to assume that our mutual utterances definitely mean something, and our duty is to identify what is it? Hence we deeply scan both talk and the context of the talk to reach out the correct conclusion. As we feel it appropriate, we may test our judgment that to what extent our understanding is correct, in a given context. It is not possible by asking questions, directly from the speaker, what speaker means by some particular word, but rather understanding the further conversation.

Talk in Educational Settings

We should start with the examination of the nature of talk between teacher and a class. By its very nature, a lesson is a verbal encounter, through which the teacher draws information form the class, elaborates and generalizes it, and produces a synthesis. It is his skill of collecting, elaborating, and improving the knowledge of the students, which makes him successful or unsuccessful (Krange & Ludvigsen, 2008).

A systematic and careful study of school demands started in early 1970s. It was revealed that teachers' talk is the greatest factor that influences children's learning. Stubbs (1976) mentioned eight broad areas of classroom language which were missing in previous researches. In the starting views he said that we still know very little about classroom interaction between student and the teacher, we have very little