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An Examination Of Teachers' Instructional Practices Fostering Student's Engagement

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ABSTRACT

PURPOSE: This qualitative study examined how teachers fostered student engagement during teaching learning process. Teacher Instructional practices inculcates cognitive, affective and psychomotor domains of the students. Purpose of the study is to engage students in their learning process and enable students to perform individual and group assignment and to foster problem solving skills. This study also aims to transform Meta cognitive skills in students.

METHODOLOGY: This research study was conducted using qualitative research where Interviews were conducted in order to capture deep understanding of the phenomena. Ten semi-structured interviews were conducted with secondary school chemistry teachers and were analyzed using thematic analysis technique. The qualitative research allowed the researcher to interview participants for an in depth semi structured interview to examine how teachers instructional practices foster students classroom engagement. Ten chemistry teachers were purposively selected in public secondary schools of District Mardan. In this research study purposive sampling technique was employed to select the Participants.

FINDINGS: Based on participants classroom teaching experiences following findings were produced:

1. Teachers utilize Variety of Instructional practices regarding the ability of students to strengthen their learning
2. Teacher Instructional practices and Individual differences
3. Elements of teaching practices fostering student's engagement
4. Factors affecting teacher's instructional practices
5. Teaching learning outcome: Memorization or problem solving

SIGNIFICANCE: Findings of this study produced some key significant parameters for various stakeholders:

Practices (Teachers)

This research work will help to inform PITE (provincial institute for teacher education) to train and reshape teacher subject knowledge as well pedagogical content knowledge through self development and self reflection courses. The study will invigorate chemistry teachers to alter traditional teaching practices with learners centered constructivist learning environments.

Directorate of Curriculum and Teacher Education

This study will help to attract the attention of directorate of education to establish a constructivist environment in school. This study will also help to inform policy makers to add to the existing body of knowledge of how pedagogical decision making will contribute to the kinds of pedagogical instruction in our school context.

Key Words: Instructional Practices, Students Engagement, Meta Cognition, Individual differences

INTRODUCTION

School environment influences teacher's instructional decision making and interactions with their learners. Before entering the classroom teachers needs to develop their lesson planning, curricular decisions, and identify what should be taught in the classroom (Roehrig, G. H., Kruse, R. A., & Kern, A. 2007). Teacher classroom planning is an important part of how chemistry teachers perceive, process, and act upon information in the classroom as well to guide the thinking and reflective processes used to make instructional decisions (Duschl, R. A., & Wright, E. 1989). Teachers set of Beliefs are catalytic and change agent that direct teachers to adopt teaching practices that satisfy learners needs and interest so that students can demonstrate learning in real life experiences (Akani, O. 2015). Teachers are the change agent and so are the student's academic Success. Teacher-centered positivist practices typically reflect a one-way transmission process where information is transmitted to the learner with limited interactive processes (Chin, C., & Osborne, J. 2008).

In Pakistan most of the teachers are ignorant of the significance of john Dewey theory of learning (Zahid, M., & Khanam, A. 2019). The learning by doing method is a hand on activity. Students are more likely to remember something if they had done it himself/herself and not just read about it because reading about things can be hard when student's brain doesn't have the context of what's going on (Hammel, A. M., & Hourigan, R. M. 2017). Each and every subject has their own specific knowledge. Teachers needs to apply teaching methods according to the nature of knowledge but the reality is completely different, because teachers are accustomed with conventional teacher centered teaching. This ill experienced Meta cognition transform drastic consequences on teacher's choice of teaching methods and ultimately results in poor student's academic achievement (Ahmad, J. 2011).

Little attention has been paid to teacher's pre and in-service training and its impact on student's classroom engagement. Therefore this research aims to reorganize chemistry teacher's pedagogical practices at secondary level.

Objectives of the Study

Following were the main objectives of the study

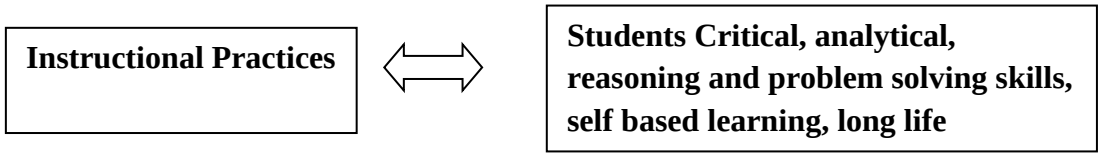
1. To find core elements of chemistry related belief to instructional practices fostering students' engagement

2. To determine the common pedagogical practices of chemistry teachers at secondary level

Research Questions

1. What core elements of chemistry related belief are related to instructional practices fostering students' engagement?
2. What are common pedagogical practices of chemistry teachers at secondary level?

CONCEPTUAL FRAMEWORK



Themes Extraction from Teachers' Instructional Practices and students engagement

The qualitative strand included ten participants systematically and purposefully selected in this research study. Upon a thematic analysis, five themes emerged from the data, and the themes are used as a framework for organizing the findings.

The themes include:

1. Teachers utilize Variety of Instructional practices regarding the ability of students to strengthen their learning

Participants believed that every student has the ability to learn. They also acknowledged that learning occurs differently for every student. Everybody can learn anything, even the term 'FAIL' mean first attempt in learning. Students don't come with a label, in fact teachers mark label of learning differences. Being a chemistry teacher, you learn different ways to help students remember things they need to know. To further illustrate that every students can learn anything, the teachers pointed out that even the teacher could learn new things too. Students can learn everyday and increase their knowledge. The respondents mentioned the contemporary teaching methods i.e. learners-oriented along with teachers accustomed to teacher centered teaching. Teacher centered teaching for students were just like parroting the teacher's knowledge.

2. Teacher Instructional practices and Individual differences

Majority of teachers declare that they do differentiation by task, availability of time into slow, mediocre and intelligent learners, teach them in groups and instruct them about cooperative study.

It is difficult to deal with the large number of students as we have in our country. Sometime teacher cannot even give a minute to a single student all because of the huge number of students in class. Most teachers unveil their view about individual differences by making groups of 5 to 8 students and each group have week, mediocre and intelligent students, but sometime it become difficult to tackle each student abilities. Teachers express their opinions that they do but up to some extent as most of students are of low order thinking skills, keep in mind about individual differences, but it's hard to give time to individual student.

3. Elements of teaching practices fostering student's engagement

Teachers knowledge, enthusiasm, emotional attachment, intrinsic motivation, multimedia, laboratory equipments, load on teachers, syllabuses based on research, proper teacher trainings, Lesson planning, friendly classroom environment, Classroom activities, parental involvements , availability of physical resources, teacher ability how to teach, Free and trustful environment, collaborative work between student and teacher, school support, are the elements that foster problem solving attitude in students.

4. Factors affecting teacher's instructional practices

Participants teachers manifest that teachers subject knowledge, Some fixed and negative beliefs, emotional attachment, lack of intrinsic motivation, lack of multimedia, laboratory equipments, overcrowded classes, workload on teachers, no proper teacher trainings, pressure of annual syllabus completion and students' result, poverty and laboring students, poor teachers Academic and professional qualification, poor annual teachers Assessment, low cognitive strength of students to grasp the concept, class control when doing group work, classroom time constraints, egoistic teacher's mentality, Poor pre and in-service training Teachers subject command, teachers low remuneration, school discipline issues, unsatisfactory environment for the teachers, syllabus completion pressure, Burden of huge classrooms strength, students assessment problems are the factors that affect teachers instructional practices.

5. Teaching learning outcome: Memorization or problem solving

Teacher's interview reveals their classroom outcome as problem solving and critical thinking because through these aspects, students are able to solve problem by their own and can make learning decisions, but some concept need memorization like symbols, periodic table elements names. Teacher's exhibit that students should be critical in order to deal scientific problem effectively that increases their retention. Teachers explained of using Problem solving but there is some ghost language concept which needs memorization.

RESULTS

Participants believed that every student has the ability to learn and learning occurs differently for every student. Students learn by repetition. We don't really see any dumb students. We use the word 'smart 'and 'dumb 'instead of 'intelligent 'or not intelligent. All students are smart all the

time. Additionally, the participants described the smallest students successes should be acknowledged. We should tell them they did a great job. Interview depicts that most of teachers adopted mix of both teacher and student centered teaching approaches. Most of chemistry teachers expressed personality skills, enthusiasm, multimedia, rapport, motivation and self-confidence building by the teacher is very important factor which can help out to encourage students, Student's maturity level is not that enough. It is the job of the teacher to direct them, giving them some independence, Students Presentation, assessment and assignment. Teacher's analysis reveals that Lack of students and teachers interest, overcrowded classrooms, Pressure to overcome syllabus, administrative interference, laboratory equipment and teacher inability how to teach. Teacher's analysis exhibit students must be critical in order to deal scientific problem effectively. Teachers declare they do differentiation by task, resources, availability of time into slow, mediocre and intelligent learners, teach them in groups and instruct them about cooperative study.

Recommendations

Based on conclusions of the study, following recommendations were produced.

1. In this modern era, chemistry teachers needs to be updated as every day new issues and concepts are being added in curriculum that can change the way students learn, and the way teachers to teach. Chemistry teachers need to understand the ability of how students can benefit of their teaching, definitely such a trait will transform teachers from didactic into more students centered teaching.
2. Every student has a different learning style and each student is unique and has the right to learn. It's recommended that teacher should be trained about proximity control and individual differences so that they may extract learner's potentialities.
3. This research shows that the goal of teaching learning process is to inculcate reasoning, critical, analytical and met cognitive skills in learners. Therefore, it is strongly recommended that constructivist paradigm of teaching should be introduced into secondary school chemistry class rooms to make the teaching learning process more effective.

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