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DIFFICULTIES FACED BY DIPLOMA STUDENT DURING STUDYING CHEMISTRY

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Abstract: Theoretical chemistry is a troublesome subject to instruct and to learn. Significant learning challenges are because of the specific perspectives on chemistry peculiarities that in numerous ways go against intuitive and ordinary perspectives on the students. Therefore, significant errors happen when understudies attempt to appreciate substance clarifications inside the structure of their pre-informative originations. This paper portrays research discoveries on understudies' students' Pre-instructional conceptions in the domain of chemistry and on attempts to guide students from their conceptions to the core ideas of chemistry. Rather than providing an overview of students' conceptions in various topics, we review learning difficulties from the perspectives of the challenge of multiple representations and the relation of chemistry to everyday experiences, including understanding the special language of chemistry. We believe that these perspectives contribute substantially to the limited success of teaching and learning chemistry. Major learning difficulties are due to the particular views of chemistry phenomenon, chemical reactions, their balancing that in many ways contradict intuitive and everyday views of the learners. As a result, major misunderstandings occur when students try to study chemical explanations within the framework practical knowledge of their pre-instructional conceptions. This paper describes research findings on difficulties arise during studying the chemistry subject.

I. INTRODUCTION

II. The target of this study was to inspect the nature and reasons for normal hardships experienced by diploma students in learning chemistry . Subjective technique was utilized to explore the inquiries, which utilized interviews and polls with understudies and instructors. The critical discoveries of the review demonstrated that understudies are being more tested by points like compound holding,colligative properties, thermodynamics, kinetics and chemical equilibrium,corrosion. The fundamental factors that are contributed for the learning troubles in chemistry faced by our students include poor cocept clearance,less of knowledge, absence of learning resources, poor learning strategies,ignorance , poor English and Mathematical skills and there is a need to improve these improvement in assessment, use of proper English language Numerical abilities and there is a need to work on these reason by utilizing prepare research facility, improvement in appraisal, utilization of legitimate English language by educators and so on.

Need of the study

The main purpose of this study was to identify the areas or topics in the diploma chemistry curriculum which students and teachers consider difficult. Specifically, this study aimed at identifying the content areas in the chemistry curriculum , which the students find difficult. The data obtained will help improve student understanding of concepts, help teacher planning and lesson preparation and make the teaching and learning of the students more meaningful and productive. The following research question was addressed: What are the causes of poor performance in chemistry as perceived by diploma chemistry students ?

Studies on understanding and learning chemistry

Understanding and learning center science ideas and standards, remembering those for science, are troublesome; many exploration studies have uncovered significant learning challenges and distinguished key reasons for these hardships. Countless mediation studies have endeavored to address these troubles by test ining the job of understudies' pre instructional conceptions in the growing experience. There is overpowering observational proof in the writing that what understudies definitely know is the critical calculate learning. Normally understudies' pre instructional originations give structures that are not as per the science originations to be learned. The main interpretive systems that understudies have are the originations acquired in day to day existence or in chemistry classes. Accordingly, in getting a handle on what is introduced in chemistry classes and in reading material, some of the time understudies construct implications that are rather than the normal chemistry view. Inside this constructivist perspective, learning isn't viewed as the admission of information that is conveyed by the educator and instructing isn't seen as move of information from instructor or course reading to the top of the understudies. Rather, learning is seen as a functioning development interaction of the student and educating is intended to help and sustain this development cycle. As needs be, learning science can be a careful course of a grouping of progressive changes of understudies pre instructional originations towards science originations . The term calculated change is normally employed to highlight this cycle since it signifies that significant changes of the underlying applied structures are vital when chemistry ideas and principles are learned. The majority of the 3000 or so concentrates on learning difficulties in science 52%. Thusly, most broad outcomes on the job of pre instructional originations in the growing experience and on the impact of reasonable change ways to deal with gaining draw on discoveries from material science, in spite of the fact that concentrates in science and chemistry do add to these bits of knowledge.

Basic Questions

1. What common difficulties do students experience in learning chemistry studying Diploma engineering?
2. Why do students experience these difficulties in learning chemistry in studying Diploma engineering?
3. How can these difficulties be minimized in learning chemistry in studying Diploma engineering ?
4. Why students donot solve multiple choice question correctly ?

METHODOLOGY

Research Configuration, Tests and Exploration Instrument

There is overpowering observational proof in the writing that what understudies definitely know is the vital consider learning. Generally understudies' preinstructional originations give systems that are not as per the science originations to be learned. According to a constructivist viewpoint, which is the prevailing contemporary perspective on learning in science training, each perception and each contribution of some other kind must be deciphered by the recipient. Student scratches develop their own implications of perceptions that they make when tests are introduced, pictures are shown, and clarifications are given by the educator or the course book. The main interpretive systems that understudies have are the originations acquired in day to day existence or in science classes. Accordingly, in getting a handle on what is introduced in science classes and in reading material, in some cases understudies construct implications that are rather than the normal science view. Inside this constructivist perspective, learning isn't viewed as the admission of information that is conveyed by the instructor and educating isn't seen as move of information from educator or A subjective technique was utilized for gathering information from science instructors and level twelve inherent science understudies chose for the review. Information was gathered through unassuming survey and semi organized interview from respondents. The scientist pick just grade diploma engineering understudies since they take care of the vast majority of the schedule of science in private academy and might give data about the normal hardships they experience during their visit in the school. Concentrate on members were chosen utilizing purposive inspecting procedure. This strategy was used to choose 30 students of the understudy’s diploma engineering educators. The examination instruments utilized for information assortment included interview and polls. The meeting and poll were intended to gather information on normal troubles experienced by diploma engineering while learning chemistry, their causes and how they could be limited. The gathered information were examined utilizing the subjective substance investigation approach. This involved distinguishing, sorting and posting reactions as indicated by topics. These reactions were coded and gathered by laying out the arising subjects.

CONCLUSIONS

It is being suggested here that chemistry can be made simple by avoiding teaching essay topics! The key lies in seeing chemistry from the point of view of the student learner. Such learners approach each topic with all kinds of ideas already stored in long-term memory. New material will link on to previous ideas and this can cause confusions and misunderstandings.

Summary:

(1) It is vital for the teacher to know students already know and how they came to acquire the knowledge. Many students come to a class with confused ideas, wrong ideas or even a complete lack of background knowledge. Learning experiences need to be offered to prepare students to grasp new material by clarifying or correcting previously held concepts or by providing fundamental instruction on such concepts. The idea of pre-laboratory and pre-lecture experiences have been explored in detail at university level and have been shown to be highly effective in increasing meaningful learning.Parallel experiences at school level will also be vital.

(2) It is important to take into account the way the learner gains knowledge and to present material in a way that is consistent with patterns of human learning. In particular, the limitations of working memory space have been shown to be important. Their model of learning has been found to be extremely useful in predicting ways by which learning can be made more effective.

(3) The process of learning should allow for the development of links between "islands" of knowledge. The teacher must link concepts so that the learner can make a coherent whole of the key ideas. This allows the development in the learner of simple but meaningful concept maps .The seminal work of Otis may well prove to be very important is showing the way conceptual development takes place in the learner and may point to all kinds of strategies, which will assist effective concept growth.

(4) Attitudes and motivation are both important aspects for the learning process. Success in learning, positive attitudes to learning and motivation to learn are linked. The two major factors influencing attitudes towards a subject are teacher quality and curriculum quality The former is not discussed here but the latter has been found to be strongly influenced by the perceived curriculum relevance, in the sense that the learner perceives what is taught being related to their lifestyle (Skryabina, 2000).

(5) Although not discussed in this paper, the place of assessment is critical in that, where the assessment does not reflect the aims of the course (usually because the assessment emphasizes knowledge recall too highly), learner motivation to seek for meaningful learning, with understanding of concepts, is less likely.

References

1.Marsita R A, Priatmoko S, and Kusuma E 2009 Analysis of Chemistry Learning Difficulties for High School Students in Understanding Buffer Solution Topic Using The Two – Tier Multiple Choice Diagnostic Instrument Jurnal Inovasi Pendidikan Kimia 4 1 512- 520

2.Campbell B., Lazonby, J., Millar, R., Nicolson, P. Ramsden, J., & Waddington, D. (1994). Science:The Salters' approach-A case study of the pro-cess of large scale curriculum development.Science Education, 78, 415-447.

3.Andersson, B.R. (1990). Pupils' conceptions of mat-ter and its transformations (age 12-16). Studies inScience Education, 18, 53-85. Silvia P J 2008 Interest – The Curious Emotion Current Directions in Psychological Science 17 1 57- 60

4.Cassels, J.R.L. & Johnstone, A.H. (1983). The meaning of words and the teaching of chemistry. In R.B. Bucat and P.J. Fensham (eds.), (1995). Selected papers in chemical education research: Implications for the teaching of chemistry.

5. Acampo, J. & De Jong. O. (1994). Chemistry teachers'learning processes: a study of teacher training and reflection on classro activities. In H-J.

6.Schmidt (ed.), Problem-solving and misconceptions in chemistry and physics (p. 229-237). Hong Kong 6.Ben-Zvi et al., 1986 R. Ben-Zvi, B.-S. Eylon, J. Silberstein