

## Manufacturing of High Quality Teachers for Chemistry Education at Higher Secondary Level in Current Era

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Education is the most influential tool whose efficient use requires the power of determination, devoted work and sacrifice. As teachers are major handler of this tool therefore, they must possess qualities of high education and competency for deliver. Education extends attractive way of life, talent and manners which make an individual a fine civilian. Primary and secondary education is one of the foundation stone of development of children and country. It acts as a vital part in placing the proper institution of child's cultural, social, moral, emotional, intellectual, physical and spiritual improvement. Primary education contributes to national development while education at post graduate level provides think tank for progress of country. The Secondary education which serves as a link among primary and higher education is expected to prepare young people between the age group of 14-18 in the world of work, who are ready to enter into advanced education.

Chemistry is the basis of life, and subject of importance in nation building, acquiring much attention from the world class Universities now days, to build interest and skills into the students for complex education. Chemical education is an active area of research within both the disciplines of chemistry and education, focusing on learning and teaching of chemistry in schools, colleges and universities, with the goals of understanding how students learn chemistry, how best to teach chemistry.

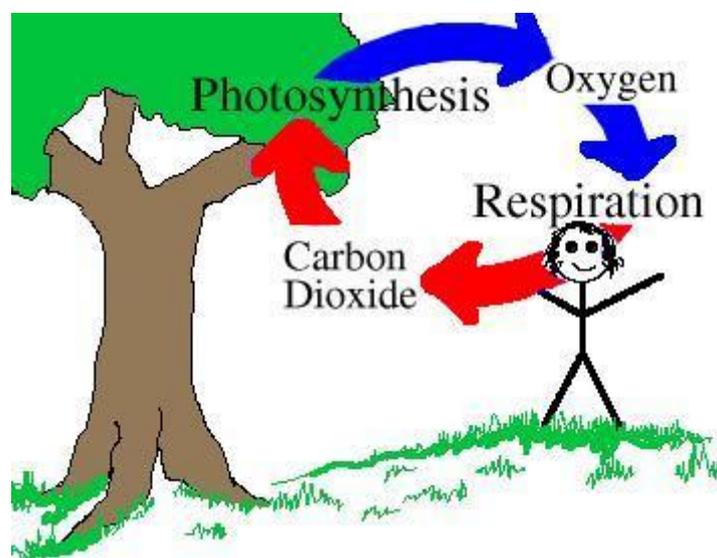
The curricula of higher secondary education require special attention at theory and practical level which should build the interest and attraction in chemistry in the age of 14-18. There is need of designing new curricula, covering chemistry in an easiest and attractive way associated with the environment<sup>1</sup>. Organization of continual workshops for teachers for fresh up courses aimed at building awareness in new themes in chemistry education. Themes<sup>1,2</sup> in chemistry education should consist of understanding, how students learn chemistry, how best to coach chemistry, and how to improve learning outcomes by changing teaching methods. The appropriate training of chemistry lecturer, include much methods, together with classroom lecture, demonstrations, and laboratory experimental activities are essential regularly. There is a constant need to update the skills of teachers engaged in teaching chemistry at secondary level.

Kyne<sup>3</sup> reported about the teaching system in multigrade classrooms throughout the world which would like to increase in near future. Kyne<sup>3</sup> addresses that professional knowledge and skills that are pertinent and compulsory to teaching efficiently in single-grade perspectives are also applicable and essential for effective multigrade teaching. Bodner<sup>4</sup> ACS director (Division Chemical Education) emphasize on improvement in K-12 science education which is now a days are increasingly choral as the need for a highly skilled logical employees and a precisely well-educated community has become imperative in the U.S. ACS is increasing its events associated for the training of high school chemistry teachers with the ACS-Hach Programs and CTEC through scholarships for chemistry majors following certification as high school chemistry teachers as well as for second-career chemistry teachers. CTEC's mission is keenly involving chemistry departments in the planning of future chemistry teachers. ACS is collaborating with NSF, PhysTEC, and APLU to develop a robust CTEC initiative that will increase both the quality and quantity of high school chemistry teachers while catalyzing changes in the culture of teacher education shared by chemistry departments. Holbrook<sup>5</sup> Study on Make Chemistry teaching relevant to under grade students showed that chemistry teaching is unpopular and irrelevant in the eyes of students, does not promote higher order thinking talents, leads to gaps between students wishes and teachers teaching is not changing, because teachers are afraid of change and need guidance. He suggested three aspects to understand the issues of relevance of chemistry teaching i) What are we trying to do? ii) How to guide teachers? iii) What could be relevant teaching materials?

The teaching of chemistry requires special attention to deliver the subject to student. This must involve several relevant factors, which include teacher competency; syllabus content and its applicability into background; everyday applied work or experiment of chemistry; and the presentation and zeal and zest of the teacher. This need full continues apprises of chemistry teacher with new searches and current contents of chemistry to make chemistry attractive, interesting for selection of the subject by the student in near future. For a high school student's chemistry is most feared & dried subject and can be a bit challenging to handle; when you are talking about chemistry. The teacher has to make sure that the subject is interesting and students can easily appreciate it that we are all enclosed by chemistry and chemical reactions<sup>6</sup>. Those are also taking place inside our own body. A chemistry teacher can easily

attract the student by just showing the things around us like how the life depends upon breath and how our body is continuously involve in exchanging of two gasses ( $\text{CO}_2$  &  $\text{O}_2$ ) for sustainable life (Fig). Name the two important gases and later on tell their function in atmosphere and human. In this way you can tell them that chemistry is not some boring and dull subject but is subject of life<sup>6</sup>.

Find out easy-to-do, stimulating trials and get your students to do them in class. . Follow these humble methods and tell about other subject to the students like social sciences, biology physics and engage your class in chemistry is valuable, basic subject of the academia and become the learned, beloved, favored high school teacher



**Figure:** Exchange of two gases in the atmosphere

## REFERENCES

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