

First African Conferences on Research in Chemistry Education [ACRICE-1]

Workshop Title: "Systemic Assessment as a New tool For Assessing Students Achievements At Higher Learning Levels".

Description: Systemic Assessment (SA) has aroused a great interest in the last 10 years, after the Systemic Approach to Teaching and Learning Chemistry (SATLC) teaching model was introduced. SA has been used to assess student's achievement in Chemistry aiming at a more efficient evaluation of the systemic- oriented objectives in the SATLC model. It became an effective tool for assessing students' meaningful understanding of chemistry topics as well as for their systems thinking level in the domain. SA assesses the students in a wide range of the course unities and measures the overarching Intended Learning Outcomes ILO,s , besides specific ILO, s. Moreover, It enables the students to discover new relation between concepts and gives them a rapid feedback during the term about how well they understand the course material.

The workshop was designed to fulfill the following goals:

- 1-Create a community of educators, teacher educators, and researchers who will share ideas and collaborate in building Systemic Assessment Questions Bank in different branches of chemistry.
- 2- Develop an appreciation of the importance of SA in assessing students' achievement in chemistry at higher learning levels [Analysis, Evaluation, Creation], which reveals the degree of development of meaningful understanding and systems thinking skills in the domain.

Objectives: At the end of this workshop the participants should be able to:

- 1-Design and build different types of SAQ,s in chemistry.
- 2-Choose the SAQ,s types suitable in building Systemic Objective Tests [SOT].

Duration: Nine working hrs divided on two days [Dec.3-4 2013]

Participants: Number from 20-25, teachers, senior teachers, University staff members, educators in Research centers, [involved in Chemistry].

Agenda of Activities:

The workshop scenario: The WS Scenario will start with presentations explaining the SA in the context of SATLC, and its relation with meaningful understanding and systemic thinking.

Then the participants will be engaged in activities to build each of the following types of [SAQ,s].

Systemic Multiple choice Questions [SMCQ,s], Systemic True False Questions [STFQ,s], Systemic Matching Questions[SMQ,s],Systemic Sequencing Questions[SSQ,s], Systemic Synthesis Questions [SSnQ,s], Systemic Analysis Questions[SAnQ,s].

The 6-Types of SAQ,s activities will be distributed on three sessions [SE-1,2,4], and one session for the systemic objective test [SOT,SE-5]. The scenarios of SE-1,2,4,5, will start by a 10 minutes presentation from the facilitators in which he will raise some questions related to the session title. Then the facilitators got answers from the participants, which clarify the details behind the SAQ type under consideration. The participants will be separated in groups [5-each] and work together to build the type of SAQs under consideration. Finally, one participant from each group will present the work of his group. As described in the sessions scenario we mix session formats to Include top-down, bottom-up activities to address every learning style.

Program

Day one (Dec. 3)

Opening Session: **[General for all workshops participants]**

9.00-9.30 : Opening remarks Prof. Temechegn Engida & others

WORKSHOPS SEPARATION

Session -1

9.30-10.30: ***WS-Introduction*** ***WS-President&***

Explanation of WS activities ***vice president***

10:30-11:00 ***Coffee/Tea Break*** ***Organizers***

11:00-12:00 ***WS Activity-1*** ***Facilitators***

[SMCQ,s]

12:00-13:30 ***Lunch Break*** ***Organizers***

Session-2

13:30-15:00 ***WS Activity-2*** ***Facilitators***

[STFQ,s, SMQ,s]

15:00-15:30 ***Coffee/Tea Break*** ***Organizers***

Session-3

15:30-16:30 ***WS Closing Remarks*** ***Facilitators***

Day-1 Assessment

Day-2 (Dec.4)

Session -4

9.00-10.30: W.S Activity -4 *facilitators.*

[SSQ,s, SSnQ,s, SAnQ,s]

10.30-11.00 *Coffee / Tea Break* *Organizers*

Session-5

11.00-12.30 WS-Activity-5 *facilitators.*

[SOT]

12:30-14:00 *Lunch Break* *Organizers*

Session-6

14.00-15.00 *WS-Closing remarks* *facilitators.*

Day-2 Assessment.

15.00-15.30 *Coffee / Tea Break* *Organizers*

15.30-16.00 *W.S. Recommendations* *facilitators*

Notes: 1- Media needed in the WS: [PC, printer, video projector].

2- Materials needed for the WS: [flip charts-Markers,Paper, Pencils].