

# Main Factors That Influencing Experiments of Chemistry Subject in Adwa College of Teacher Education, Tigray, Ethiopia

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The intention of this study was to check the impact of the core factors, which affect the experiments of chemistry Adwa College of teacher education. To carry out the study a descriptive survey method was used. The sample consisted of 50 students, 4 instructors, and 2 lab technicians from the study area. Regarding the respondents, the students were randomly selected, while instructors, lab-technician and college managements were purposely selected. Data collection instruments used was questionnaires, interview and observation. Data obtained from questionnaires were analyzed using statistical tools like frequency and percentage. The data obtained from interview was analyzed qualitatively and data obtained from observation was analyzed quantitatively and qualitatively. The results from the study showed that, factors that affect the experiments of chemistry in Adwa college of teacher education were absence of well-trained lab-technician, unavailability of chemicals, equipment's and apparatus, lack of external and internal facilities, inappropriateness and, large number of students, shortage of instructional materials, inconvenient learning environment and etc. These problems undermine the quality of the experimentation in science education. Thus, the college and concerned bodies should address these problems jointly. Hence, the researcher forwarded based on the findings and conclusions, recommendations were made to alleviate the existing problems. Accordingly to minimize large number of students, hiring lab technician and building alternative lab rooms for each course, equipped with sufficient chemicals, apparatus, equipment's, preparing relevant and appropriate manual, allocating budgets for laboratory to purchase important materials and other which were assumed to solve the identified problems were recommended.

**Keywords:** Apparatus, Chemicals, Experiments; Laboratory and Laboratory technician