

Developing a teacher guide to help prospective teachers in teaching science

Prospective teachers show a preference to attend classes and do practicals in learning science, but have problems in translating what they learn in their teaching. In their lesson planning they pay attention to cover the content without considering the level of understanding of students. This paper is based on a part of a study on preparation of curricular material to teach science for meaningful understanding. Six prospective teachers who had their teaching practice in two schools in the neighbourhood of the researcher was selected for the study. The unit they selected for teaching was "Light reflection" to students in year-7,8 and 9. A pretest was given at the beginning of the unit to diagnose the level of students. A posttest was given upon completion of the unit to understand problems of students. After observing the lessons of these six prospective teachers, the researcher conducted debriefing sessions about their teaching to understand their problems. All the lessons and discussion sessions were tape recorded. Considering the problems and weaknesses they demonstrated in their teaching the researcher developed a teacher guide based on constructive approach to help them in year9 teaching. Prospective teachers showed an improvement in their teaching especially in trying to understand students' preconceptions, but there were weaknesses due to the lack of understanding of nature of science and the teacher as a facilitator. Teachers' knowledge about how students make sense of scientific concepts plays a major role in helping students to understand science.