UNIVERSITY OF BIRMINGHAM

LEARNING DEVELOPMENT PROJECT OVERVIEW FORM

Project title	Investigation of the introduction of enquiry-based learning in the School of Chemistry		Project ID No	**CLAD – HIST011**
Strategy area/theme	Chemistry			
Start date	Oct 2006	Completion date	July 2010	
Project type	Learner independence project			
Level	1st Yr U/G	Programme of study	Chemistry	
Aims	– To introduce aspects of enquiry-based learning in appropriate modules of the School's undergraduate degree programmes – To ensure a pedagogic basis for any enquiry-based learning introduced – To provide independent learning skills for our undergraduate students to enhance their employability skills – To use this study as the basis of an MPhil in Chemical Education			
Objectives	**Phase 1 (Oct 2006 – Sept 2007):** 1. To set up an Advisory Committee comprising our Educational collaborators, representative teaching staff, and a number of student volunteers from each of the teaching years (for example members of the Staff Student Committee). The role of the Advisory Committee is to give guidance on the direction of the student's research, evaluate the student's findings, make subsequent recommendations to the School's Education Committee, and to ensure implementation of all approved recommendations. 2. To investigate student and staff expectations of learning. 3. To audit and evaluate current teaching practice within our entire curriculum, both in terms of lecture and laboratory-based teaching, and also to examine good current practice within other Institutions (including visits where appropriate). This would include pre-induction practice. 4. To review Educational Literature on enquiry-based learning (EBL), especially within the Chemistry (and Physical Sciences) area, and student-centred learning approaches in HE, in conjunction with collaborators from the School of Education, and the Higher Education Academy Physical Sciences Centre. In addition, to evaluate the work of the Centre for Excellence in Enquiry-Based Learning (CEEBL) at the University of Manchester. 5. To attend training courses in "Flexible Learning", "Blended Learning", and "Online Assessment and Feedback" run by the Staff Development Unit, and any other appropriate courses, especially on problem-based learning (PBL) or EBL, e.g. as offered by the Higher Education Academy. 6. To shadow Schools within the University where PBL/EBL is already in use, *e.g.* the Graduate Entry Course at The Medical School. 7. To devise novel teaching approaches to pilot EBL within the curriculum, especially in Year 1, so that the approach can be learnt by students early on in their course, and built upon in subsequent years. These approaches could include problem-based learning (and 'hybrid' PBL), case studies (possibly in conjunction with Industry), investigations, individual and group projects, and research activity. 6. To investigate any changes required in the assessment procedures needed for the EBL pilot studies, in conjunction with staff. 7. To consult with staff involved in implementing the pilot studies to discuss any training requirements.			

	Phase 2 (Oct 2007 – Sept 2008): 1. To implement the pilot studies, particularly in Year 1, in conjunction with staff from the School, and overseen by the Advisory Committee. 2. To evaluate the findings by investigation of staff and student feedback, and results from assessment. 3. To devise further pilot studies for Phase 3, (particularly for Years 1 and 2) based on the findings from this Phase. **Phase 3 (Oct 2008 – Sept 2009):** 1. To implement further pilot studies, in conjunction with staff from the School. This would result in two consecutive year groups having experienced EBL, namely Years 1 and 2, giving a much wider basis for evaluation. 2. To evaluate the findings by investigation of staff and student feedback, and results from assessment. 3. To disseminate the findings by means of recommendations to the School and University as to "Best Practice" in this area. In addition, to present findings (poster or oral) at appropriate local and national conferences, publication in the literature, and submission of a thesis.
Overview	The School of Chemistry Undergraduate Teaching Programme is largely research-led and teacher-centred. In order to move the ownership of learning more towards students, and therefore to foster independent learning. In order to achieve these objectives, it was decided to introduce students to enquiry-based learning as early in the Degree Programme as possible, both to help students to make the school to university transition more smoothly and to encourage learner independence at the first possible opportunity.
Further Information	For further information on this project please contact CLAD at University of Birmingham cladprojects@contacts.bham.ac.uk quoting CLAD projects HIST011