

**Chemistry is All Around Network
Workshop on "Student's Motivation"
Limerick (Ireland) 28 May 2013**

Minutes

Participants

Name	Institution
Marie Walsh	Limerick Institute of Technology
Diane Condon	Ard Scoil Ris
James Ring	Limerick Civic Trust
Maria Sheehan	St Caiman's School
Michelle Herbert	Hazelwood College
Brian Dillon	Castleconnell National School
Ciara O'Shea	Tubbercurry Community School
Angela Gammell	St Joseph's Spanish Point
Claire McDonnell	Dublin Institute of Technology
David Sutton	Limerick Institute of Technology
Rose Lawlor	Ard Scoil Ris
Grace Kenny	Castleconnell National School
Ciara NiDhrisceal	Gaelcholaiste Luimnigh
Maeve Liston	Mary Immaculate College

Venue: Limerick Institute of Technology, Main Boardroom, Moylish Campus

Minutes

Apologies: Kathleen Lough, Mairead Glynn, Michelle Starr

Venue: Boardroom, Limerick Institute of Technology, Limerick, Ireland.

Date: 28-05-2013

Chair: Marie Walsh (LIT)

1. Marie welcomed all to the workshop and introduced all at the meeting thanking those who had travelled a distance to attend.
2. Apologies were given for Michelle Starr, Mairead Glynn and Kathleen Lough, who were unable to attend in person but who had skyped comments or sent powerpoints regarding their reviews.
3. The group was introduced to Dr Maeve Gleeson from Mary Immaculate College, who is now one of the Associate Partners to the project.
4. Marie thanked all for their contributions to date regarding this particular workshop.
5. The agenda of the day's workshop was outlined and this was followed by a summary of the project to date highlighting the theme of today's workshop and the focus of year two of the project aims and objectives i.e. Teacher Training in Science.
6. A discussion based on the following was engaged within the working group under the following headings and within an Irish context
 - a. **Consecutive Vs Concurrent** training of student teachers. It was felt that both had a significant importance in the education and training of effective science /chemistry teachers. This was significantly dependant on several key factors including the student ; the particular philosophy of the department or third level institute; The delivery mode (and the 'lecturer') and the motivation or students perception of what is a chemistry teachers. Of the specifics of consecutive versus concurrent training it was felt that there were advantages and disadvantages to each method and that a blend of both was ideal but difficult to get the correct balance base on the 'dependant' key factors. However, content knowledge was identified as possibly lacking in some instances.
 - b. **Pre-service and In-service training.** To date pre service training for primary school teachers has not been evident. However Dr Maeve Gleeson of MI College Limerick informed that this is currently being addressed at undergraduate level but the benefits of which may not be seen for four years i.e. graduates of 2017. In-service training in the Irish context is not a mandatory requirement for teachers at either primary or secondary level. However, the uptake of such training where available was significant by teachers in Ireland despite it usually being outside of 'normal' working conditions with no recognition by the education department nor incentive.
 - c. **Probation and Induction** – This is not undertaken in Ireland specific to Science/Chemistry teaching. However the approach is a well established in the Irish system for any teaching role within a primary, secondary or tertiary education level. The group felt that a science mentor either within a school or locally among community of schools would be of huge benefit to teachers. The potential for a third level lecturer to be engaged in such roles was a positive contribution but in need of much exploration.

- d. **Continuous Professional Development;** In the context of second level teachers of science/chemistry CPD was well catered for with courses run on a regular basis. However notable of teachers commitment to CPD and the need for it is evident in that fact that the courses are oversubscribed and that waiting lists exist.

2. **Discussion regarding the group's reviews of papers and publications on the portal** site (the European context for teacher training) took place. Marie thanked all for their contributions and for them being uploaded on to the portal. There was broad discussion of the reviewer's experiences regarding the papers.

It was felt that there were significant issues with the communication of information as a result of poor translation with regard to some of the papers. Issues with regard to quality and relevance to the stated aims and objectives of the project in year two were raised. It was felt that a stricter peer review process prior to up loading on the portal may benefit in a positive way in the future of the project. Papers that were contributing to the debate were in some instances based on what should be done in that particular European country and not on the current situation.

Marie Walsh gave a brief outline of the Irish papers which were selected for the Irish context. The issue of publications over ten pages in length (some being books) was observed as being impractical to review.

The main issues which emerged during the course of the discussion in the European context were centred on the 'Misconception' of primary information attained by student's teachers and the continuation of the misconception being continued on in the chain to the secondary level students. This was acknowledged as a possible situation in the Irish context too but with no firm evidence.

The issue of the use of ICT was discussed in the context of one of the reviewed publications and this was discussed in the Irish situation. It was felt that while the future of the teaching of science/chemistry was most definitely with ICT given the prevalence of it in everyday life that there must also be a focus on the technique of blended learning to include traditional teaching methods. How this balance could be achieved was discussed with no firm conclusions.

3. The following topics were discussed with regard to future work;
- a. **Methodologies to teach specific topics** – The used of various media and ICT as tools for teaching which are either available as packages or a group based project e.g where students using as a core of a Chemistry themed song to develop an accompanying 'stills shot' video which visually explains the science of the song: the example given by Dr Maria Sheehan is currently on *you tube*.

While other examples of such initiatives were discussed the constraints of such methods were examined and it was felt that such teaching was often time consuming and was too liberal as a method when the syllabus is so well defined. It was also felt that both students and parents are focused on the exam process and the final grade as opposed to the topic of chemistry. The system as it is in the Irish context is very constricting and that the emphasis for the students is the final examination process. To that end it was felt that such a project style using blended learning should be incorporated into the learning through the contribution of such work to a continuous assessment grade which would be incorporated in the final grade.

- b. The importance of **training science teachers to keep up to date** with the continuous progress of research was dictated by the recommended texts for the subject and the extra circular activities engaged with by teachers and students such as SciFest and the BT young scientist competition. It was felt that CPD also has a role to play here.
 - c. The **use of simulations** had a major drawback regarding cost and relevance to the syllabus. While there were many resources available the detail and relevance did not always match the syllabus learning outcomes and had limited used either being too detailed and in depth or not enough. There may be a possibility to develop such resources specifically for the Irish situation. Simulations did have a role in a blended learning environment. It was also noted that such learning resources are taxed at 23% in Ireland and possibly to a similar extent in Europe – The current project may be a good vehicle on a European level to repeal such taxes?
4. Before the workshop ended the group completed Portal Evaluation forms.

Finally Marie thanked everybody for their contribution and continued support and professional engagement in the project.

Marie Walsh

29 May 2013