

# LSIS Practitioner Enquiry: Supporting underachieving chemistry students through peer mentoring

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## LSIS Research

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### Background

Operating with the Physical Sciences Department, one of the largest departments within Winstanley College, chemistry as an individual science has around 350 AS students and around 225 A2 students. In general, student outcomes are high at both AS and A2 (performance against value added criteria is grade 2, outstanding at AS and grade 3, excellent at A2).

For AS chemistry, 65% of students achieve grades A-B against a national average of 36%, and 97% of students achieve grades A-E against a national average of 82%. Students at AS have in the past had access to tutorial support provided by a departmental assistant outside of scheduled lessons, however financial constraints have meant that

this level of support could not be maintained.

In order to provide some additional support to students outside that provided by teachers in the classroom we decided to run an A2 peer mentor scheme for chemistry students on a pilot basis, to determine if this was a successful way of supporting underachieving AS students; if successful it could be extended to all Physical Sciences students.

### Starting point

Subject tutors sought volunteers to act as A2 peer mentors at the start of the academic year. The PowerPoint advertisement was displayed in class and emailed to all A2 students. It provided an outline of the requirements.

- Work as part of a small team, either for Autumn

Term (F321 module) or Spring Term (F322 module), for 45 minutes once a week to:

- support AS Chemistry students on recently assessed work by helping them to identify where they went wrong and how to rectify it.
- provide guidance for AS Chemistry students on the completion of work which is due to be assessed (not complete the work for them!)

It also provided an outline of the potential benefits for acting as a peer mentor:

- develop and maintain knowledge of AS module content
- develop interpersonal skills
- include in subject reference for UCAS / DOE etc.

No specific grade requirements

mentor, but the scheme attracted those with higher grades. Initially, 57 A2 students volunteered, almost all with grade A at AS chemistry. They returned a request slip with information on their AS module results, preferred module and timetable availability.

## The intervention

The A2 peer mentors were divided into two groups: one operating in the autumn term providing support on the F321 module; the other operating in the spring term providing support on the F322 module. In order to provide access to support for all AS students it was necessary to operate five one hour sessions each week, each session had around five A2 peer mentors allocated to it. AS students could attend the support sessions either on a drop-in basis or by referral from their subject tutor, a register was taken both for AS students and A2 peer mentors.

## Impact

The system operated with some success during both the autumn and spring terms with student feedback being provided through a free format feedback form available each session and an email questionnaire at the end of each term.

Attendance by A2 peer mentors was excellent with most sessions having 3 peer mentors available, no sessions were cancelled because of a lack of A2 support. Attendance by AS students caused a number of issues; initially there was a large variation in demand for support for AS students both on a weekly basis and in each of the 5 weekly blocks. This was alleviated by reducing the drop-in aspect of the session and placing greater emphasis on subject tutors selecting a small number of AS students to attend on a long-term. The system worked best when the A2 Peer Mentor worked on a 'buddy' basis with individual AS students; in the second half

of the Autumn Term when the system was operating at its best attendance for AS students was approximately 60%.

Room availability was a major issue throughout the project, it was not possible to allocate the same room for all 5 blocks; the rooms allocated were not close to chemistry teaching rooms and the rooms allocated changed throughout the year. Room changes (often at short notice) caused considerable disruption, the Physical Sciences Department is due to relocate to a new building shortly and room provision may improve at that time.

AS students provided very positive (free-format) feedback on the quality of support provided by A2 students; they were most impressed by their subject knowledge and ability to apply this to examination questions. Both AS and A2 students commented very favourably on the high quality (and standardisation) of departmental resources.

<b>A composite of the responses (approximately 25% of all attendees) to the end-of-term email questionnaire to AS students</b>				
	Strongly agree 1	2	3	Strongly disagree 4
I have found the peer support sessions helpful	55	24	10	10
A2 students providing support have good subject knowledge	74	17	9	0
I understood the purpose of the peer support session	65	23	7	4
I knew when and where I was expected to attend the peer support sessions	35	37	16	12
I attended most of the peer support sessions when requested to by my subject mentor	66	34	0	0

## Next steps

The department intends to wait until completion of the new Physical Sciences building which incorporates a dedicated science 'study area' before continuing with the peer mentor system. The system would be modified to operate from the start on a buddy system with AS students being selected on a term by term basis.

## Contact

This study was carried out by Jeff Wilson at Winstanley College. If you have any questions or comments, please email: [jeff.wilson@winstanley.ac.uk](mailto:jeff.wilson@winstanley.ac.uk)