

The Higher Education Academy Physical Sciences Centre

Annual Report 2006-7

1. The Physical Sciences Centre

The Centre is hosted at the University of Hull with contracted partners at the Universities of Liverpool and Surrey.

Director	Tina Overton (Hull)	0.5 fte
Manager	Paul Chin (Hull)	1.0 fte
Administrator	Liz Pickering (Hull)	1.0 fte
Communications Coordinator	Roger Gladwin (Liverpool)	0.8 fte
Academic Coordinator	Ruth Wellock (Hull)	1.0 fte
Project Officer	Tracey Madden (Hull)	1.0 fte
Consultants	Steve Walker (Liverpool)	0.2 fte
	Dick Bacon (Surrey)	0.5 fte
STEM Coordinator	Steve Walker	0.2 fte

2. Changes, challenges, constraints

The major change at the Centre this year has been the arrival of three new members of staff. Ruth Wellock joined us as an Academic Coordinator and is involved in all aspects of our work such as organising events and running Special Interest Groups. Tracey Madden joined us as a Project Officer specifically to manage our JISC-funded e-Portfolio project but has become involved in wider aspects of our work. Both Ruth and Tracey have made a really positive contribution to the Centre and have quickly become valuable members of the team. We were fortunate to recruit Liz Pickering to the post of Administrator from the chemistry department at Hull. Liz is very experienced and has been an excellent appointment for us.

One of our biggest challenges this year has been our involvement in the web portal project. We view this project as a very positive development for us as it should enable us to maintain our web presence in a more effective way but it has, nevertheless, required a massive time commitment and without the appointment of Tracey and Ruth we would not have been able to commit enough time to it. We are now looking forward to the launch of the new site. The adoption of Integra has also been welcomed and although time consuming, we expect it to produce real benefits in the near future.

'The website is very useful for pointing you in the right direction when looking for information.'

It was hoped that, with the increase in staffing levels, we would be much better placed to contribute to the work of the Academy over this year. This has happened to some extent but we are aware that staff from some other SCs are more involved than we are. This is not due to a lack of interest or commitment but purely due to diary constraints and prior commitments.

A major constraint on the level and range of your work of which we are becoming increasingly aware is funding. As demand for our services increases and our range of projects and activities expands we are being ever more challenged financially. We

constantly review expenditure and look for lower cost options but this situation is inevitable, especially in the aftermath of recent pay awards and the HERA process.

3. Highlights

The online employability module has proven to be successful. It has been piloted at six institutions and has become embedded in their curricula.

The Centre was successful in gaining HEA funding for a sustainability project run on its behalf by Leicester University. In addition, further funding has enabled collaboration with Staffordshire University for a digitisation project on archaeological artefacts (exhumed skeletons) which will offer educational resource benefits to a range of disciplines.

The Centre has been active in educational research with staff presenting papers at two international conferences and publishing two papers.

This year we hosted a lecture tour by Professor Melanie Cooper from Clemson University, USA. Melanie is an eminent chemistry educator with an international reputation and gave a series of very well received lectures around the UK, finishing with a high profile event at the Royal Society of Chemistry.

Our entrepreneurship project resulted in the publication of a collection of teaching and learning resources on CD and associated dissemination events.

The biennial Science Learning and Teaching Conference was our biggest event this year and we enjoyed the experience of collaborating with colleagues from Biosciences and Materials Subject Centres once again.

Once again, we participated in the Student Essay competition and were delighted when one of our entries won the overall national prize.

We re-launched our publication *New Directions* this year as a collaborative venture with pi-CETL. The new format was so well received that *New Directions* has moved from being an occasional publication to a regular publication.

We now have a closer relationship with all STEM centres with regular briefing meetings and initiatives such as the STEM 'wiki' and a joint seminar for keeping admissions tutors up to date with current school curriculum changes.

With increased staff we have been able to make a concerted effort to focus more on our Departmental Representatives. This has resulted in just about every physical sciences (and increasingly forensic science) department having a named representative, giving us about 99% coverage of departments. This has been reflected in another upturn in numbers attending our annual Departmental Representatives' meeting.

4. Curriculum design and development

Curriculum development is a major focus for us. Chemistry, physics and astronomy are well established disciplines. That often goes hand-in-hand with a very traditional approach to teaching and our role is to foster new approaches to teaching these disciplines. Conversely, forensic science is a very new discipline with little in the way of tradition and little in the way of an established curriculum or published resources. Our role in this case is to support the development of new resources and curriculum materials.

We published two important Practice Guides this year. *Factors Influencing Curriculum Development in Chemistry* and *Factors Influencing Curriculum Development in Physics* provide guidance based on the outcomes of pedagogic research in the disciplines. Pedagogic research is seldom consulted by academics and these publications distilled out the most important findings and presented them in an accessible way, with extensive bibliographies. The Guides were very well received by our communities and copies were circulated to members of the European Chemistry Thematic Network, an EU funded network of chemistry educators.

Enterprise and entrepreneurship are increasingly high profile themes within HE and the physical sciences have much to offer in terms of innovation and invention. We have been working with Kevin Byron, a creativity specialist and ex-industrial physicist, for several years and this year we funded him to produce a resource pack for academics to teach entrepreneurship. The resource covers the development of an idea from first concept, through patenting, business plans and to the market place. The resource was published on a CD and copies have been taken up by Materials, Bioscience and ICS SCs.

We funded six Development Projects this year four of which involved the development of learning resources for use with undergraduates. Development Projects remain a key way of facilitating curriculum development within departments.

'We are grateful for the Development Projects funding.'

5. Initial and continuing professional development

Most of our work is related to providing professional development for new or experienced staff. This year has been no exception.

'The Centre offers both basic and cutting edge staff development.'

Once again we organised a workshop for new lecturers. This was held the day immediately before our Physics Higher Education Conference with the intention that some of the physicists might stay on for that meeting, which some did. The workshop was very well received. All participants were provided with a resource box containing samples of our most relevant publications. One of us (TO) contributed to an EU-funded summer school of new chemistry lecturers from across Europe. All of the 35 participants were provided with resources boxes of our publication and these were very well received.

'a focal point for the dissemination of good practice..'

We organised a range of regional and national workshops:

- *Supporting New Lecturers*, Leicester, 30 participants from 18 institutions
- *Outreach: Outreach in Collaboration*, Nottingham Trent, 46 participants from 40 institutions (with Centre for Excellence in Learning Science CETL)
- *Teaching Entrepreneurship: Resources for Academics*, Leeds Metropolitan University, >25 participants from 14 institutions
- *Flexible Delivery and e-Learning*, University of Birmingham, 18 participants from 13 institutions
- *Supporting Engineering and Physical Science Students: A Workshop for Demonstrators*, University of Manchester, 41 participants from 14 institutions
- *Animations and Simulations*, University of Central Lancashire, 18 participants from 13 institutions

- *JISC-HETIS-HEA e-assessment meeting*, University of Southampton, 22 participants from 20 institutions
- *Departmental Representatives' Meeting*, London, 53 participants from 45 institutions
- *Directors of Teaching Meeting*, London, 46 participants from 32 institutions
- *Maths for Chemistry*, 33 participants from 22 institutions
- *E-learning SIG meeting*, Birmingham, 17 participants from 12 institutions
- *E-learning SIG meeting*, Teesside, 11 participants from 7 institutions
- *E-learning SIG meeting*, Manchester, 14 participants from 8 institutions
- *Animations and Simulations Workshop*, UCLAN, 18 participants from 13 institutions
- *Recent Changes to 16-19 Qualifications*, Keele, 40 participants from 27 institutions

As usual we organised three subject specific conferences:

- *'Variety in Chemistry Education'*, Keele, 50 participants from 37 institutions (with Royal Society of Chemistry Tertiary Ed Group)
- *'FORREST, Forensic Science Research and Teaching'*, University of Central Lancashire, 75 participants from 42 institutions (with Forensic Institute Research Network)
- *'Physics Higher Education Conference'*, Leicester, 25 participants from 11 institutions (with Institute of Physics HE Group)

In addition, we organised second biennial *'Science Learning and Teaching Conference'* in Keele in collaboration with the SCs for Materials and Biosciences.

This highly successful national conference was oversubscribed and the feedback from participants was very favourable. This is a good example of a high profile collaborative SC event.

Our efforts to break into departments are focussed on two main strategies. Firstly, we invite completed Development Projects to visit departments to present the outcomes of their projects. This scheme has proved very popular and 13 departments requested such visits this year. Secondly, we invite eminent chemistry or physics educators from overseas to give a lecture tour in the UK. This year we hosted Professor Melanie Cooper from Clemson University, USA. Melanie spent two weeks in the UK, giving 8 lectures. This strategy of offering high profile speakers appeals to the research-led culture within physical sciences departments. We received many more requests for Melanie's talk than we could accommodate and many came from Russell Group universities, a sector usually difficult to break into.

'All the activities I have attended have been very good. I enjoy the opportunity to meet colleagues as much as I benefit from the topic of the meetings. The annual Reps meeting is especially beneficial'

Our range of publications directly supports professional development. Relevant publications this year include:

- The newsletter, *Wavelength*
- *Physical Sciences Educational Reviews*
- Student versions of the Employability Profiles for chemistry physics and forensic science
- *Factors Influencing Curriculum Development in Chemistry Practice Guide*
- *Factors Influencing Curriculum Development in Physics Practice Guide*
- *New Directions*

- Update to *Annotated Bibliography*

'The publications are excellent.'

6. The research teaching nexus

The impact of involving undergraduate students in research was explored in one of our completing Development Projects this year. '*Assistive Learning and Research Mentoring Schemes*' at Nottingham Trent University involved first to third year undergraduates in established research groups on a voluntary basis with startlingly positive outcomes for the students and the staff involved. This project has been disseminated via departmental visits, conference presentations and publications.

This year we supported a bid to the Scottish Funding Council for an enhancement theme project on the research/teaching nexus. This bid was successful and we will be working closely with the bidders as the project proceeds.

7. Assessment

The development and deployment of the Physical Sciences Question Bank, a JISC / Academy DEL project, is now in the piloting stage. This specialised database with its administrative tools and versatile academic interface currently contains a few hundred questions. These can be aggregated into assessments, and used in the major VLEs (WebCT, Blackboard, Moodle), on paper, or in other suitable assessment systems. Academics from several departments are currently involved in trialling the system and intend using question sets from the bank with their students during the autumn of 2007. The population of the question bank is continuing, and the interface functionality will be refined in the light of the trials. The question bank concept is raising considerable interest with academics, who rightly see it as a way of making better use of their institutions' VLEs without incurring large additional workloads.

In early 2006 the Centre was successful in a joint bid with the University of Hull, Loughborough University and the Engineering Subject Centre to develop a peer assessment tool. This is an ongoing, two year project aimed at developing an open source software tool for use in HE across the disciplines. It is also promoting innovation in the adoption of peer assessment, having enlisted two additional institutions to act as pilots for cross institutional embedding of the project outcomes.

In conjunction with this project, the Centre Manager, Paul Chin, is undertaking a part time PhD in the field of e-learning for peer learning and assessment. In the past year the Paul has presented papers at numerous conferences, including two international conferences and published a paper co-authored with the Director. These publications have shown the Centre as a research active unit and raised the profile of the Centre's activities at local, national and international events.

8. Employer engagement

In collaboration with the SCs for Engineering and Materials, the Centre is part of an employer engagement project with a number of Sector Skills Councils. This project is aimed primarily at engaging in dialogue with SSCs to raise issues about fostering better relationships between employers and HEIs. The project itself is proving successful in forming good working relationships with SSCs and the outcomes of the project (due to report in January 2008) will aim to help inform future work for employer engagement.

The Skills for justice SSC covers forensic science and are represented on the UK Forensic Science Education Group (UKFSEG) of which the Centre is also a member.

Initial positive contact has been made with Skills for justice and it is hoped that potential areas for collaboration will be explored in the coming year.

9. Employability and enterprise

Our Entrepreneurship project came to fruition this year with the publication of a CD of learning resources, designed so that any academic can teach a course covering the journey of an idea from concept to market place. The resource was disseminated to other STEM SCs and a collaborative dissemination workshop was run with the Institute for Enterprise CETL at Leeds Metropolitan University. Sessions were also run with our Departmental Representatives and first year undergraduate students at Hull. This is a very useful resource with excellent supporting materials and should be widely applicable to many disciplines.

We continue a relationship with the University of Glamorgan with an employability workshop which was delivered to 40 Forensic Science students this year.

Our online employability module is now complete and is available in Blackboard, WebCT (CE and Vista versions) and Moodle formats. Trials have been conducted at the University of Bath, Manchester University and the University of Liverpool. Feedback from staff and students has been very useful and very encouraging.

In addition to our existing student employability profiles for chemistry and physics students we recently developed a forensic science version with support from the forensic science department at the University of Glamorgan. These have proved popular with a number of other institutions requesting multiple copies for their students.

10. Widening participation

A very successful meeting 'Outreach in Collaboration' was held in conjunction with CELS to promote the cross-fertilisation of ideas and to encourage cooperation amongst producers of outreach materials. Another event is already in the planning stage. There were several notable outcomes requested by delegates:

- Discussions on establishing regional meetings directed at giving practical help to practitioners. These will be held in collaboration with the relevant CETLs.

- A restricted Email list for communications between active producers.

- One of the suggestions to arise from the discussions was the use of a 'wiki' to facilitate details of resources, events, tips & tricks and so on. This has been developed for us by Philip Brown at the BA using the same engine as 'wikipedia' and it opened for business in May/June with the intention of supporting outreach in all STEM areas. This will initially run for a trial period of 12 months. The mechanism of interacting with a wiki is quite different from the usual academic practices and the community will require quite a lot of support to come to terms with this new technology if it is to be successful.

11. Successes and practice to share across academy

Both our online employability module and our entrepreneurship resources are fairly generic and could be adapted to make them useful across many disciplines and we would be happy to share them with other SCs.

12. Engagement with institutions

Our most successful engagements with departments are probably our seminars by high profile, overseas speakers. These events appeal to the research culture within most chemistry and physics departments but they are expensive events for us and our reach in terms of numbers of departments visited cannot be large.

Dissemination of Development Projects uses a similar approach i.e. offering free speakers for departmental research seminar programmes. Uptake is good and this is a relatively cheap activity for us, in terms of cost, administrative support and staff time.

We also present seminars to departments on specific topics at their invitation. These are usually at their request and meet a local need. What we find to be least effective and least satisfying is trying to go into departments to talk specifically about the SC or HEA.

‘..particularly effective are visits to departments to deliver bespoke events’

We are providing on-going consultancy to the Chemistry Department at the University of Birmingham, where they are trying to move to an Enquiry Based Learning approach. This consultancy has involved presentation of seminars, meetings with staff and acting as an advisor on a PhD studentship. This is proving an effective way of making an impact within this department as it is by invitation and addresses a local challenge.

We have provided packs of resources to new lecturers in departments, either via their attendance at our new lecturers’ workshop or via the teaching and learning support unit in the institution.

13. Involvement at host institution

The profile of the SC has increased quite markedly and it is valued much more since the introduction of the contribution towards full economic costs. Staff of the Centre are increasingly being used in an internal consultancy capacity.

Tina Overton is a member of the University Learning Teaching and Assessment Committee and Chairs the Learning and Teaching Enhancement Committee. She was on the selection panels for National Teaching Fellowship nominees, University Teaching Fellowships and the University Innovations in Student Learning Fund. She organised a World café event with the Centre for Learning Development and holds a collaborative grant with a colleague in Modern Languages. She is acting as an advisor to Sports Rehabilitation where they are trying to implement problem based learning.

Paul Chin is a member of the University Assessment Committee and the faculty of Science Learning and Teaching Committee. He is a University Teaching Fellow and has organised two University-wide staff development events on peer learning. Paul also served on the review panel for a major institutional review of VLE provision.

The Centre hosted a meeting to disseminate Development Projects at Hull and invited all colleagues from chemistry and physics.

Two colleagues from Hull, one from the Centre for Learning development and a Careers Advisor, are members of our e-portfolio project Steering Committee. The PVC for Learning and Teaching is a member of the Centre Advisory Committee.

14. Collaboration within the Academy

Our collaboration with other STEM (Bioscience, Physical Science, Materials, Engineering, MSOR and ICS) SCs goes from strength to strength. This has been greatly facilitated by the appointment of Steve Walker as 0.2 fte Stem coordinator at the start of the year. Steve has been able to gain a good overview of each of the

SCs, to recognise areas for collaboration and to organise regular meetings of the STEM team. Tangible outcomes of this include several joint meetings and an agreed joint action plan for the next operational year. The Centre organized an important briefing for all STEM subjects entitled “Recent Changes to 16-19 Science Qualifications” intended to inform university teachers about the developments taking place in schools leading to changes in the qualifications of intending applicants.

The second biennial Science Learning and Teaching Conference took place this summer. This is a joint event between Physical Science, Bioscience and Materials and has quickly become established as a high quality national conference.

One of us (TO) is a member of the MSOR Advisory Committee and a member of the panel for the Review of the Student Learning Experience in Materials.

Our major area of collaboration with Academy York has been on the Web portal project. We entered this project very optimistically as we had a real need for a new website which was easy to maintain and update. Despite inevitable teething troubles we have not been disappointed and look forward to a problem free launch. The York team have been very accommodating and all of our requests for changes have been dealt with efficiently.

We have transferred all our mailing list contacts into Integra to give us a database which will allow us to store a wealth of information. This will provide us with a much better record of our engagement with institutions and individuals. We took the opportunity to write to all our contacts before transferring them into Integra to ensure they were still active and want to be on our mailing list. This has now given us a smaller mailing list size but one in which are individuals are active. We hope to use Integra with the new website to register people onto events to make this a quicker, automated process.

We have worked with the Academy in a number of other ways. For example, the JISC/HEA collaboration, sharing and repurposing of resources from and for other SC such as our employability card sort (used by Engineering), the Burlington group, the DeL eportfolio group.

15. Collaboration with professional bodies

We continue to have meaningful collaboration with the Royal Society of Chemistry (RSC) and the Institute of Physics (IOP).

Tina Overton is a member of the RSC Education Division Council and the Tertiary Education Group Committee. She is also on the Advisory Committees for the RSC HEFCE-funded ‘Chemistry for our Future’ and the IOP HEFCE-funded ‘Stimulating Physics’ projects.

Ruth Wellock is a member of the RSC North Humberside Section Committee. She also convenes the Maths for Chemistry SIG which was established in collaboration with the RSC.

Dick Bacon is a member of the IOP Higher Education Group Committee.

Both the RSC and the IOP have members on our panels for the Reviews of the Student Learning Experience in Chemistry/Physics and the RSC, IOP and Royal Astronomical Society have members on our Advisory Committee. Representatives from the RSC, IOP and the Centre for Recording Achievement are members of our e-portfolio project Steering Committee.

15. Collaboration with CETLs

There are four science-based CETLs that we work closely with. These are Bristol ChemLabS, the Centre for Excellence in Learning Science (CELS), pi-CETL and the Centre for Open Learning of Mathematics, Science, Computing and Technology (COLMSCT). We have representatives on the Advisory Committee or Management Committee of each of these CETLs.

We have facilitated two meetings for CETLs with an interest in science. These meetings attracted representative from approximately 12 CETLs and we are coordinating collaborative activity between and on behalf of these CETLs. We have organised joint events with CELS and the Institute for Enterprise CETL. Staff from the four science CETLs have contributed talks at Centre workshops and conferences. CELS sponsored the Science Learning and Teaching Conference and pi-CETL sponsored the last issue of *New Directions*.

17. Key subject related initiatives

Despite failing to secure Academy funding as one of the three pilots, we decided to undertake our own Reviews of the Student Learning Experience in Chemistry/Physics. We are running these as two separate reviews with two separate panels. We have engaged two experienced academics to act as Consultants on the Subject Reviews. The process started in March with our first two panel meetings. The reviews will deliver reports in Sept 2008. For the past few months the Consultants have been drawing up a questionnaire for staff and for students and planning data collection strategies. To support the reviews we have held a meeting for Directors of Teaching in all chemistry and physics departments. We feel that we need to have these important individuals on board if we are going to be able to gather enough data to make the Reviews meaningful.

18. Engagement with Sector Skills Councils

We have continued to foster meaningful collaborations with our relevant SSC, with a SEMTA representative sitting on our Advisory Committee. We are also actively engaged in a project called 'Engage' (with Engineering SC too) with both SEMTA and Cogent – our two main cognate SSC. This project is proving particularly successful in fostering good working relationships with SSC and we envisage the outcomes of this project to help lay the foundations for further, ongoing engagement in the coming years.

Representatives from SEMTA and Cogent sit on our Review of the Student Learning Experience panels. Review panels

20. Scotland

This year we have had three members of the Advisory Committee from Scotland. We funded one new Development Project at the University of Strathclyde and held departmental seminars at Heriot Watt and contributed to the Teaching and Learning Day at Aberdeen University. Overall, 85 colleagues from Scotland attended our events. We supported colleagues in Edinburgh and St Andrews in their successful bid to QAA Scotland for an enhancement theme project. Colleagues at St Andrews are also acting as pilot sites for our ePortfolio project and a colleague from Edinburgh University sits on our ePortfolio Steering Group.

21. Wales

We have one member of the Advisory Committee from Wales. There are a small number of physical science departments in Wales. However, we delivered an

Employability workshop in Glamorgan. 17 colleagues from Wales attended Centre events.

22. Northern Ireland

We have one member of the Advisory Committee from Northern Ireland. We have several contacts at the University of Ulster who have made it clear to us in the past that they welcome the opportunity to travel to the mainland for events rather than have any organised in Belfast. We have been unsuccessful in establishing contacts with Queens, Belfast University. 10 colleagues from Northern Ireland attended Centre events.

Evaluation Report 2006-2007 for the Higher Education Academy: Physical Sciences Centre

Jim Ryder,
School of Education,
University of Leeds.

September 2007

Overview

The Physical Sciences Centre (PSC) continues to provide a highly valued service to the subject community. The range of PSC activities is impressive. Staff at the PSC are highly motivated and professional. There is excellent leadership and direction and they work very well as a team. An ongoing and very welcome feature of PSC activities is the willingness of PSC staff to seek out, and respond to, the needs of the community they serve. Indeed, the demand for PSC services continues to increase. Whilst welcome, this also results in very significant (and increasing workload) pressures on PSC staff. A key success over the year has been the successful integration of three new members of staff within the PSC team. These new members have provided a very positive contribution to the work of the PSC.

The sections below address each of the five Strategic Aims as identified in the Subject Centre Strategic Plans 2005-2009. Key successes and challenges are identified. The final section of the report discusses evaluation activities over the coming year.

Professional development activities

Over the past year 15 workshops have been held. Many of these workshops have been targeted at specific groups, e.g. departmental representatives, new lecturers, postgraduate students and demonstrators. Attendance figures show an impressive average attendance of 29. Completed feedback forms show that those attending generally comment very positively on the quality of these workshops. A total of 13 departmental seminars have also been held in 2006-07. These are based on the outcomes of Development Projects funded by the PSC. These seminars are an important way of disseminating the outcomes of PSC activities.

Workshop feedback forms include a section asking attendees: 'which ideas from the workshop could you try to implement in your own teaching?' Responses show that many attendees do leave sessions with clear intentions to change their practice in response to workshops, seminars and conferences. However, the PSC team are well aware that such intentions may not be implemented back in the workplace. In response to this issue the PSC team asked me to provide suggestions of how workshop evaluation activities might provide more insight into actual impact on practice. This resulted in some suggested changes to the workshop evaluation form, and also the possibility of conducting post-workshop interviews with selected attendees from targeted workshops. In response to a request from the PSC team I have also drafted a written response questionnaire for completion by speakers following workshop sessions.

Disseminating good practice and innovation

The PSC website is a key method by which activities and resources are disseminated to the physical sciences higher education community. A major focus of PSC activity over the year has been to redesign and re-launch the PSC website. This has involved a substantial workload for PSC staff, but hopefully one that should ease in the coming year. Looking to the future a key issue will be to monitor and evaluate usage of the new website.

The PSC team continue to produce a wide range of printed and electronic resources, e.g. Practice Guides, Briefing Papers, a newsletter (Wavelength) and Physical Sciences Reviews. These are produced to a professional standard. A key issue for dissemination is the actual readership (as opposed to delivery) of these publications. In 2006-07 a questionnaire was sent out to all Departmental Representatives asking them about the presentation, distribution and impact of publications within their department. The design of the questionnaire involved PSC staff with input from me. Analysis of responses resulted in some useful suggestions for future improvements to the presentation and distribution of publications. Some Departmental Representatives identified publications that had had an impact on their practice. However, several respondents felt that the main outcome of publications was to keep them informed of developments and to hear about different teaching approaches, rather than to result in significant changes to their practice. The development, use and analysis of this publications feedback/impact questionnaire, and the subsequent response of the PSC team to these findings, provides one example of the extent to which the PSC team are responsive to the needs of the community they serve.

The extensive and growing network of Departmental Representatives continues to be a real asset for the Centre. Currently the PSC has an assigned Departmental Representative in 99% of relevant departments (up from 90% in the preceding year).

This year has also seen a significant increase in the number of attendees at the annual Departmental Representatives meeting: 40 (2004); 36 (2005); 33 (2006); 53 (2007). The Evaluator attended this meeting in 2007. The meeting was very well organised and those attending were very positive about the experience. An overview of feedback from the Departmental Representatives meeting in 2007 is provided in the Appendix.

Finally, one example of the commitment of PSC staff to effective dissemination (and the esteem with which they are held in the broader community) is the invitation to Tina Overton to act as editor of a special edition of a science education journal focusing on the work of the PSC.

Engaging with pedagogical research activities

The PSC continues to be involved both in the dissemination of existing insights into pedagogical research (e.g. through conferences and workshops) and the provision of support for new research and development activities (through Development Projects). A particularly successful innovation in recent years has been the PSC lecture tours given by high profile educational researchers from overseas.

In collaboration with relevant professional bodies three conferences have been held addressing teaching/learning in higher education. These have focused on physics, chemistry and forensic science, with an attendance of 25, 50 and 75 respectively. Many presentations at these conferences include consideration of pedagogical research. The Departmental Representatives meeting also included presentations on pedagogical research following from Development Projects funded by the PSC. This is a good example of the ways in which PSC activities are disseminated more broadly.

Contacts with professional bodies

The extensive and growing list of collaborations detailed within the Annual Report demonstrates the commitment of the PSC team to networking across the sector. PSC staff have succeeded in gaining funding for a number of projects in collaboration with other bodies. In addition, three teaching/learning conferences have been organised each in collaboration with a professional subject body.

Internal management and organisation

The work of Tina Overton (Director) and Paul Chin (Manager) continues to be of an excellent standard. The administration of PSC activities by Liz Pickering has been highly professional. Ruth Wellock (Academic Coordinator) and Tracey Madden (Project Officer) have provided excellent contributions in their first year in post. Roger Gladwin continues to provide very effective support as Communications Co-ordinator. The advice and suggestions from PSC Consultants Steve Walker and Dick Bacon are

highly valued. Members of the Management Committee and Advisory Committee continue to provide an important source of feedback and new ideas. Overall this is an impressive working team.

Evaluation activities for the coming year

The report above highlights the substantial achievements of the PSC team in the year 2006-07. It also refers to some significant challenges in ensuring that PSC activities result in changes in teaching practices and hence student learning. In particular the PSC faces a significant challenge in broadening the impact of their activities across the user community, e.g. beyond those who regularly attend PSC events. Overall feedback from attendees at the 2007 Departmental Representatives meeting (appendix, and also my discussions with individuals at the meeting) echoes that from those at the 2006 meeting (feedback included in my 05-06 evaluation report) namely that the PSC is doing a very good job and its activities are well received by those who attend events, and read resources, but perhaps the major challenge is finding ways of engaging with those who currently do not.

The PSC team are keenly aware of this challenge. In response, an agreed aim of my evaluation activities in the coming year is to co-ordinate case studies of effective dissemination and impact, as resources allow. These will be used to identify the features of such activities that result in success and which may be more broadly applicable. Case studies may also extend to contexts in which practitioners who were keen to develop their practice, or that of their colleagues, following engagement with PSC activities were unable to do so. Such case studies will examine the barriers to effective impact. Initially these case studies will focus on the impact of recently funded development projects. However, the focus will extend more broadly to other areas of PSC activity (e.g. workshops). A key outcome of this analysis will be an identification of the factors that support, or militate against, PSC activities having an impact on teaching practice. Following this analysis consideration would then need to be given to the extent to which PSC activities are able to influence any of these factors.

Appendix 1: Feedback from attendees at the Departmental Representatives Meeting, London, April 2007

Participants were asked to respond to the following three questions:

- Can you list activities which you feel the Centre has done/continues to do well?
- Can you list any activities which you feel the Centre perhaps has not done as well as it might have been able to do?
- Are there any activities which the Centre currently doesn't do, or perhaps doesn't engage with some issues, which they might do?

There were 36 completed questionnaires from 53 participants. An overview of responses is provided below:

Activities which you feel the Centre has done/continues to do well?

Respondents cited the full range of publications, conferences and meetings as being of high quality. Several comments praised the provision of 'specialist one day meetings' and 'bespoke events' that responded to the needs of the community. One respondent saw the PSC as:

A focal point for the distribution of good practice

In addition many responses focused on less tangible outcomes of PSC activities:

Sense of community

Networking activities allowing colleagues to meet

Broadening my horizon

Activities which you feel the Centre perhaps has not done as well as it might have been able to do

The vast majority of responses to this question were of the following kind:

To be honest I couldn't really think of anything which could be improved greatly as I think you're doing a pretty good job.

A small number of specific suggestions for improvements focused on the need to widen dissemination and impact.

Perhaps greater influence within departments. Don't know how to do this! [Departmental Representatives] try hard but difficult to get message across to the unconverted.

The Centre has an excellent track record. However, it is still not as well known as it should be. Somehow (I don't know how) perhaps [Departmental Representatives] need to work harder to disseminate the work. Maybe individuals should run a resource seminar in their institution.

Activities which the Centre currently doesn't do, or perhaps doesn't engage with some issues, which they might do

Most respondents did not identify any additional areas of work for the PSC. Two responses suggested that the PSC needs to engage with policy makers and politicians, for example to improve funding for research into education in Higher Education.