

# **Relations between Teaching, Research and Technology in Economics HE: Results of the 2005 Economics Network Survey of Lecturers**

In May and June of 2005, the Economics Network conducted a National Survey of Economics Lecturers. It is a biannual survey and is intended to provide valuable information on existing teaching practices in economics and problems facing lecturers. Its findings are compared to the previous (2003) results to see if there have been any significant changes. This survey is part of the centre's research into teaching and learning economics along with surveys of students, alumni and employers. The questionnaire has been somewhat altered from the 2003 version, but investigated the same three main themes: perceptions of relations between teaching and research, the use of technology in teaching economics and changes in teaching practices over the previous two years.

The survey was conducted online for the ease of use and low cost. 185 respondents from 65 institutions completed the survey this time, compared to 125 in 2003. It was intended as an observational study and not a controlled experiment. The respondents do not constitute a random sample of all economics lecturers in the UK, but a self-selected group. As a result, their views may not fully reflect the opinions of all economics lecturers. Although respondents expressed a wide range of views on teaching and research, we acknowledge that the results of the survey could be biased towards lecturers with an interest in teaching and learning issues, as they were more likely to complete the survey. For the purpose of validation the respondents were asked to supply their e-mail address. The survey results will allow the Economics Network to focus its efforts more effectively in support of economics lecturers.

The survey consisted of 18 questions, divided between 5 sections:

- About you and your institution,
- Teaching and research
- Use of technology in your teaching
- Your teaching
- Future networks.

The survey benefited from free-text commentary by the respondents on all the questions. Representative quotes from these responses are included in the report in italics.

## ***A. About you and your institution***

Respondents were asked to name their employing university, their gender, post, years of experience in teaching in HE, courses that they teach and at what level. Lecturers from 65 HE institutions took part in the survey. The results describe the typical respondent as:

- Male (75%), although this survey included more female respondents than the one in 2003, where males constituted 81%.
- In the post of Lecturer (pre 1992)/Lecturer or Senior Lecturer (post 1992) – 68%. Lecturers in these posts constituted 50% of respondents in the 2003 survey.
- With more than 10 years of experience in teaching in higher education (63%). This was a similar percentage to 2003 (62%).
- In full-time employment (94%). This was the same percentage as 2003.
- Teaching various economics courses at both undergraduate and postgraduate levels including, but not limited to, Introductory Economics, Microeconomics, Macroeconomics, Quants and Stats, Labour, Industrial, Development and Monetary Economics, and MSc and PhD dissertation supervision.

## ***B. Teaching and research***

In the 2003 survey we asked lecturers about their attitudes towards teaching and research and their perceptions of how their departments rank them. The majority of respondents (54%) believed that their departments considered teaching considerably or somewhat less important than research, while among the respondents themselves this view was shared by less than one third (27%). Equal value was attached to teaching and research by slightly more than two out of five of the respondents; while only one in five thought that that was the way their departments saw it.

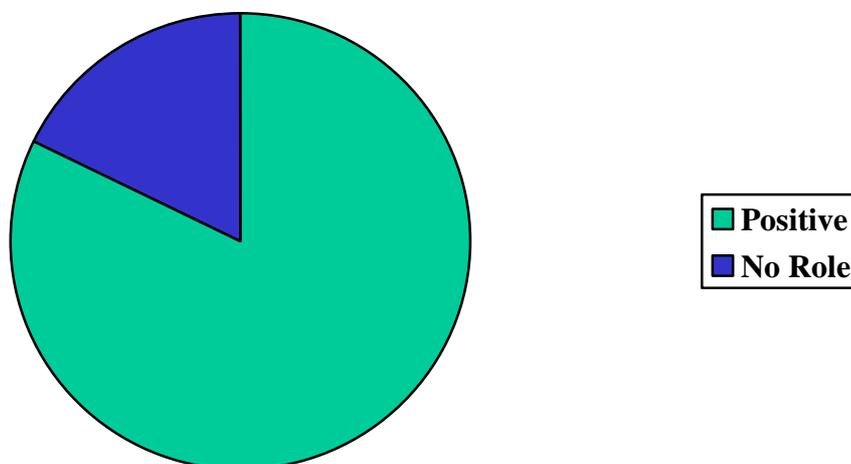
This year we wanted to explore further the question of how lecturers perceive the relationship between teaching and research. We asked whether they see teaching and research as complements or as substitutes and what are the implications of their answer.

The relationship between teaching and research has been the subject of many papers published in UK, USA and Australia. The conclusions from those papers, however, are contradictory and will be further discussed in a separate publication.

Respondents from our survey, when asked about the area of their research, gave very diverse answers, including, but not limited to Applied Econometrics, Applied Macro and Microeconomics, Development Economics, Economics History, Finance, Industrial Economics, International Economics, Labour Economics, Regional Economics and Political Economy. Some of the lecturers mention economics education, while a few notes that right now they are not interested in research. Among those who answered our survey, less than one in five (18%) believe that

research plays no role in teaching, while the majority (82%) think that it plays a positive role. No one suggested that it plays a negative role.

**Figure 1. Attitudes of respondents on the role research plays in their teaching**



Those who replied that research plays no role in their teaching either did not leave any comment or gave one of the following comments: “*teaching not related to my research*” or “*mutually exclusive*”. Only one of the respondents mentioned that students’ lack of interest in the course makes it impossible to convey the interest of research.

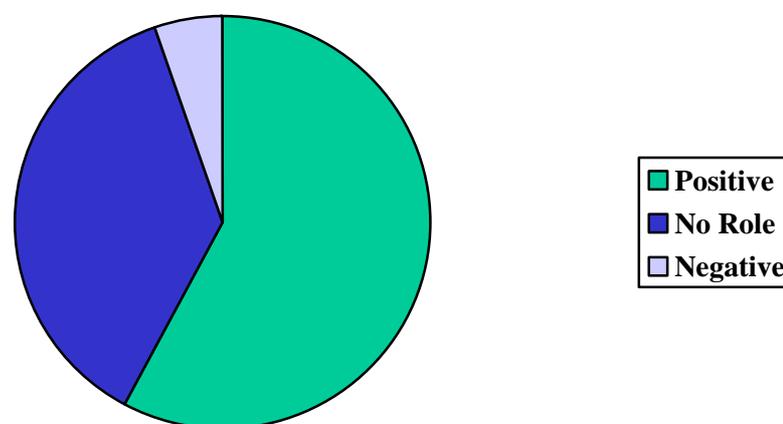
Among those who find a positive role for their research in teaching, some respondents provide specific examples of this role, while others give general comments about their mutual influence. “*Teaching and research are intertwined because one gives you ideas to employ in the other!*” The following are some typical examples:

- *Empirical findings from the research complements theoretical understanding of the topics covered in teaching*
- *Provides examples and illustrations*
- *Sets the agenda*
- *Informs curriculum*
- *Provides issues for class discussion*
- *Raises competence and confidence*
- *Strong link between research and dissertation supervision*
- *Helps ensure the currency of materials in the reading lists*
- *Active research*
- *The nature of research makes me more aware of issues to do with effective teaching and learning*
- *Builds up knowledge both of technique and applications*
- *Ability to give students some idea of what’s going on at the frontier*

- *Research gives me new ideas about new ways of teaching standard results*
- *Validation of lecturer as economics professional/practitioner outside the classroom*
- *Focus on aspects that my research can highlight*
- *Gives me data sets*

The attitudes of the respondents were less positive when we asked them what role teaching plays in their research. This time 5% pointed to the negative role of teaching, 37% presume that it doesn't play any role, but the majority of 58% still agreed that the role of teaching in research is positive.

**Figure 2 Attitudes of respondents on the role teaching play in their research**



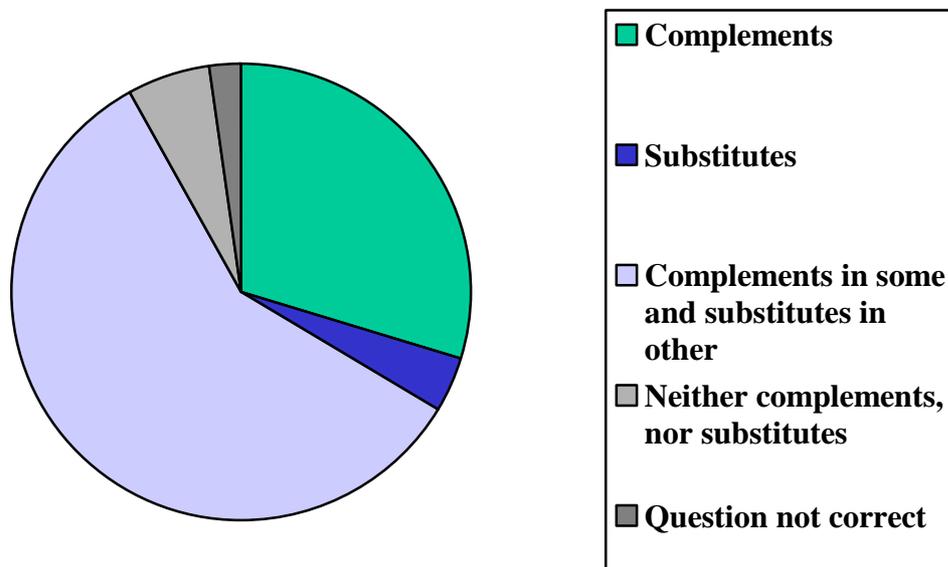
Those who describe the role as negative either left no comments, or pointed to the fact that teaching takes time from research and that they are mutually exclusive. Those who deny that it plays any role also left few comments, just pointing to the fact, that “occasionally get an idea from teaching, but it is rare”. The majority, who see the role of teaching as positive, provided specific examples. The following are representative:

- *Use my students as examples*
- *Students questions make me think about potential research questions*
- *Some of my work on pedagogic issues is carried out within my teaching activity*
- *Teaching a topic makes you work hard about making it understandable*
- *Helps sharpen/focus some arguments*
- *Students views provide fresh ways of looking at issues*
- *Application of rigorous, defensible tools of economic analysis to areas of applied research*
- *Use teaching experiences in theory and vice versa*

- *Influences my choice of research topics*
- *Testing ideas by having to explain them in simple language*
- *Teaching tests clarity of understanding and grasp of issues and drives scholarly enquiry*
- *Need to teach beyond research areas keeps me up with broader aspects of the subject which benefit my research*
- *Some research ideas develop from teaching problems*
- *Helps me identify gaps in literature*
- *Motivated a new line in educational research*
- *Feed back on what is happening in local areas*
- *Use classroom experiments for research*
- *Expanding knowledge of field*
- *Action research*
- *Better understanding of students learning needs*
- *Try to structure papers as if I am teaching them*

We also asked the respondents about their perception of teaching and research in economic terms; whether they were *complements* or *substitutes* and what were the implications of their answer.

**Figure 3 Respondents' perceptions of teaching and research in terms of complements and substitutes**



About 2% of the lecturers thought the question was not correct and asked for it to be re-constructed. As for the rest, a majority of 58% agreed that teaching and research are complements in some respects and substitutes in others. Less than a third (30%) thought that they are complements and not substitutes, while 4% agreed with the opposite statement, that they are substitutes and not complements. The last small group of 6% said that research and teaching are neither complements nor substitutes.

The respondents suggested the following implications for their answers:

#### I. Complements in some respects and substitutes in others

- *Research informs my teaching but teaching and research compete for the time I have*
- *Teaching and research should be complementary but teaching is seen as a “second rate” activity compared to research*
- *Teaching should be efficiently organised to minimise preparation and assessment demands*
- *Each activity can yield multiple benefits but time spent on predominantly on activity or another incurs an opportunity cost in terms of the other one*
- *That work loads should make room for both; and that allocation of teaching amongst staff should take appropriate account of research interests and activities*
- *Need for more balance in rewards and incentives*
- *I feel happier teaching in areas where I do research, while developing new teaching material can generate new research ideas*

#### II. Complements and not substitutes

- *There are diminishing returns to teaching which may turn negative*
- *More effort should be made to integrate the two*
- *More ‘respect’ should be given to teaching*
- *You need time afforded for both and equal emphasis on both*
- *Maybe there is scope for individuals specialising in research or teaching*
- *If researcher is a good teacher, then research is beneficial and has a positive aspect on teaching; but if researcher is not good at teaching then students receive few benefits from research of teacher*
- *Advanced teaching is research informed and teaching stimulates research questions*
- *Teaching and research are complements, but they are not viewed as complements under the modern quality assurance approach. The teaching quality bureaucracy has become a hindrance in combining teaching with research. The implication is to revisit QA*
- *Advancing research keeps teaching current*
- *Departments need to exploit synergy between research and teaching*
- *Current RAE funding strategies are quite irrelevant and tend to categorise individuals in a way that diminishes the richness of what is going on at university*
- *That a blend of research and teaching produces benefits all-round*

- *Research and teaching are two wheels of a carriage*
- *Research in its widest sense supports teaching, but is not a substitute for it. Being a researcher is no excuse not to teach*

### III. Substitutes and not complements

- *Only a fool puts any effort into teaching. The university takes the view that teaching is a “bad”, research is a “good” ...certainly true for academic promotions both within and between institutions*
- *That one should teach as little as possible*
- *We should be paid and rewarded separately for each*

### IV. Neither complements nor substitutes

- *I am not using my research in my teaching since I am teaching different stuff from my research*
- *There should be career routes in both areas, not just in research*
- *Depending on the specific nature of teaching and research, they may be complements, substitutes or independent*

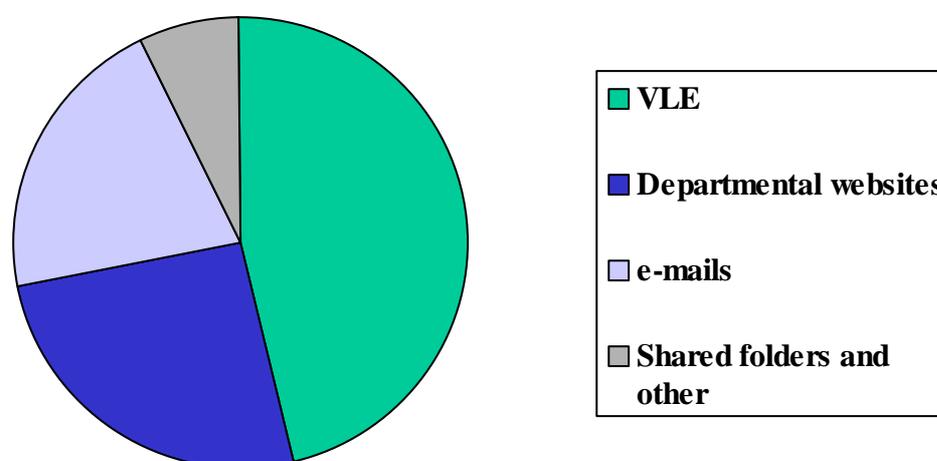
The issue of the relationship between teaching and research is one of growing interest and concern in UK higher education and the Economics Network can use the results of this survey to further inform the discussions in this area on a national level and to help support the enhancement of the relationship.

Where there is perceived to be a conflict between teaching and research, HE institutions need to consider how their research can best enhance their teaching, rather than distracting academics from improving their teaching because the necessary time to do so impinges upon their research time.

### ***C. Use of technology in your teaching***

Questions regarding the use of technology in teaching were included in both the 2003 and 2005 Surveys. This has allowed us to track the changes in this area over the intervening period. Lecturers were asked what technological medium they used to communicate with the students. In 2005 nearly half of them (46%) replied that they use a Virtual Learning Environment (Blackboard, WebCT, etc.), while a quarter of them use departmental websites, and slightly fewer – about one in five – use e-mails. The remaining 7% use either shared folders or other technological media.

***Figure 4 Use of technological media by respondents for communicating with students***



Respondents' replies regarding the possible use of various activities on the VLE or departmental web site for individual courses/modules are summarised in the table below. All the data is in percentages, where 100% is equal to all lecturers who replied to this question (roughly about 160 replied for this question).

***Table 1. VLE features or departmental web activities respondents use now or may consider in the future (%)***

Teaching activity	Use now	May consider	Will not consider
Delivering learning resources	81	15	4
Communicating with learners	72	21	5
Supporting discussion	19	53	28
Tracking the progress of learners	19	57	25
Providing online formative assessment	23	60	18
Conducting online summative assessments	9	58	33
Collecting student submissions	16	64	20
Supporting peer or self-assessment	6	61	33
Supporting personal development planning	7	59	34

Comparing these data to the results of 2003 survey, there has been a significant increase in the use of technology in teaching economics. More of the lecturers are now using a VLE or departmental web sites in their teaching (58% of the respondents used it in 2003 and 87% in 2005). VLEs are also used in more creative ways: their use for communication with learners has increased from 40% to 72% and for online assessment from 17% to 23%. They are used for tracking the progress of learners, supporting PDPs, and “*providing means to do independent and self-driven studying and research*”, as one of the respondents put it. Though, as we can see from the table, respondents still mostly use VLEs for delivering learning resources.

It is important for us to know not only what features of VLEs respondents are using already, but also what they are considering or not considering using in the future and why. One in six respondents use it for collecting students’ submissions, while more than three out of five may consider using it for this purpose in the future. More than half of the respondents who are currently not using VLEs for various teaching activities may consider doing so in the future. About a third of respondents are not considering using a VLE to support personal development planning, peer or self-assessment or conducting online summative assessments. The main reason for that is the same as 2 years ago: time constraints. Only a few of the respondents doubt the benefits of different aspects of technology to the students.

We also asked lecturers about those aspects of technology that are available to them, but which they are currently not using and why. In their answers respondents mostly mentioned some facilities of Blackboard and WebCT that they are not using now, and agree that they could use more of them. Amongst other mentioned aspects were interactive whiteboards, personal response systems, Questionmark Perception software and short message texting. Some of the lecturers mentioned that they do not use PowerPoint slides.

Respondents provide detailed remarks about the reasons why they do not use all the facilities, available to them. These reasons could be divided into several groups:

A. No time

- *They are VERY time consuming and the payoff is low*
- *No time to invest in sunk cost required*
- *Time constraints for setting up courses*

B. No skill

- *Lack of development time*
- *Need coaching to be sure which are available, as well as how*
- *Too much investment in learning how to use for marginal gain in delivery to students over what I do at present*

C. Technology is not reliable

- *No technical back-up*
- *Still not 100% confident of robustness of network*
- *Unreliable, does not look professional*

D. Students don't use them

- *Virtual office hours – students ignored them*
- *Students tend not to use them*

E. Not impressed with it

- *Do not find it useful*
- *I have not found the system to be very user friendly*
- *Learning technologies are a poor substitute for real physical contact with students*
- *Prevents teaching and interaction*

F. Lack of awareness of existing resources

- *Not aware of useful materials in my area and very time consuming to create*
- *Not sufficiently developed for math*

G. PowerPoint is not an effective tool

- *It doesn't enable the development of an argument*
- *Students often disengage if classes are over reliant on PP*
- *They deter students from taking their own notes which is very important cognitive step in the learning process*

The majority of respondents mentioned two of the suggested reasons – lack of time and skill. Providing resources that could ease the use of various aspects of technology in teaching will be one of the targets of the Economics Network in the coming year.

Given various services, which could be provided by the Economics Network in respect to the use of technology, the respondents were asked to rank their priority, with 1 as most valuable. The average ranks can be seen in Table 2.

**Table 2. Average rank of the desirable services that could be provided by Economics Network, with 1 as most valuable**

Service	Rank
Information about the new technologies that are available in Economics	2.4
Access to peer-reviewed learning resources	2.7
Staff development in using new technologies to support effective learning	3.1
Guidelines, case studies and publications relating to the effective use of e-learning	3.2
Opportunities to share ideas and experiences with colleagues	3.3
Excel templates	4.3

Nearly half of the respondents rank provision of 'Information about the new technologies that are available in Economics' as most valuable. Slightly less valuable they find 'Access to peer-reviewed learning resources', while 'Staff development in

using new technologies to support effective learning' is in third place. The Economics Network will use this information in prioritising the development of resources and provision of workshops in the coming year.

## **D. Your teaching**

In the 2003 survey, nearly half of the respondents mentioned that they had changed their teaching methodology. Unfortunately no comments were left to explain the reasons for this change. This year we not only asked lecturers whether they have changed their teaching methods in the past 2 years, but also specifically invited their comments on this issue.

Results were similar to the 2003 Survey. More than half of the respondents (56%) replied that they have changed their teaching methods in the past two years, while two out of five said that they have not done so, with 6% having taught for less than two years. Some of the respondents commented on the essential need for change in teaching – *“If you are a reflective or reflexive practitioner it should”, “Teaching always changes to meet the diverse needs of students”* The suggested reasons for change could be divided into two following groups:

### A. Change in pedagogy

- *Use students' input in order to set tone of lectures*
- *Use PBL [Problem-Based Learning]*
- *Changes in the form of assessment*
- *I use 'ask the audience' with buzzers*
- *I've made my teaching even more interactive*
- *More discussion based supervisions less marking of written material*
- *No longer overcrowding the syllabus – more time for students to reflect*
- *There is more in-class group work*
- *Try to incorporate techniques which take account of different learning styles*
- *Using active learning methods in classes*
- *Using experiments and games*

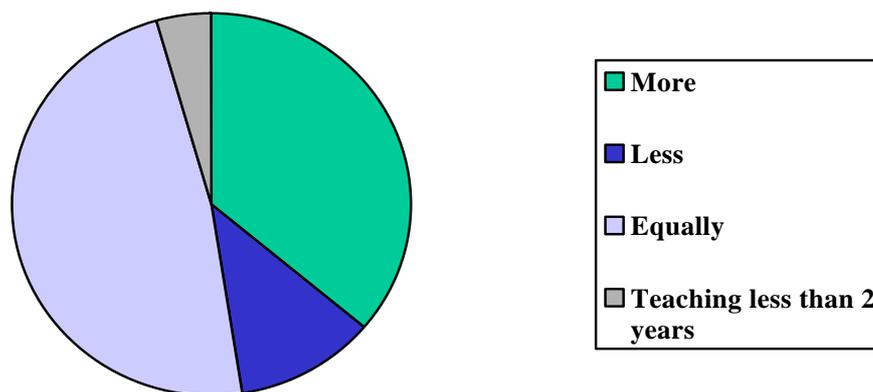
### B. Change in the use of technology

- *Start using WebCT*
- *Developing on-line tests and participating in e-convening course*
- *Greater use of Blackboard*
- *Greater use of ICT and e-learning generally*

- *More e-mailed teaching files for support – more likely to be read by students than if just posted on module web site*
- *More on line facilitation*
- *All modules are now supported by Blackboard*
- *Much more use of intranet and whiteboards*
- *We had been using Blackboard and also visualise technology in the classroom*

We also asked lecturers about their satisfaction with the effectiveness of their teaching compared with two years ago. Nearly half of the respondents (48%) were equally satisfied, while one in eight were less satisfied and one in three were more satisfied with the effectiveness of their teaching. The rest of the respondents have been teaching less than 2 years.

**Figure 5** *Change in the respondents' satisfaction with the effectiveness of their teaching in the past 2 years*



Comments provided by the respondents give us an insight into the lecturers' perceptions of what brings them satisfaction in teaching.

Those who feel less satisfied than they were two years ago point their finger mainly to students and their behaviour problems:

- *Quality of student intake deteriorated*
- *Reduced student engagement / commitment*
- *Motivational issues where time has been spent preparing classes that the students don't fully engage in*
- *Students seem increasingly unable to take on an active role in their learning*
- *Even in an elite university, student discipline in lectures is becoming a problem*
- *We are concerned about the number of students coming to class unprepared*

They describe the increased pressures on their time to do research and administrative work:

- *Increased pressure in other areas (admin) meant had to cut back either time dedicated to teaching or research – I chose to maintain research but am now less prepared for teaching*
- *I am personally unhappy about having to make a conscious decision to pull back on the effort I put into teaching – It is really quite depressing but I cannot do everything*
- *I can't put as much effort as I would like into both research and teaching*

Some of the lecturers are also complaining about “too much bureaucracy”, “poor IT reliability” or blaming themselves for “not making effective use of information on good economics practice”.

Only a few of the lecturers who describe themselves as “equally satisfied with their teaching as they were two years ago” provided comments to their answer. Some of them used comments to stress that little had changed:

- *The same courses are delivered in the same way, though different ways in each course*
- *No real change in past 2 years*
- *I always got and still get excellent teaching evaluations*

Some were very self-critical:

- *Equally unsatisfied, too, in that I'm always seeking to do better cost effectively in terms of time, other resources (and other commitments)*
- *It is more difficult to get across reflective ideas because teaching is more directly geared to assessment*

While others were still pointing to the similar problems:

- *Time constraints and work loads make it difficult to invest time and effort in new teaching approaches*
- *The environment is highly constraining but I think I do OK within it*
- *I am certainly a better teacher, but at the same time quality and preparedness of students and objectives are changing (not always for the better)*
- *However, too much 'spoon feeding' is expected. Students don't (can't – for financial reasons) do as much independent work as we would expect*
- *My problem is with student disengagement. As paying customers they know that universities need the income and that failing them for idleness is much less likely than in the past*

Lecturers who see themselves more satisfied with their teaching pointed to three main reasons for that:

- A. They became better teachers
- *Further learning from experience*

- *Continual improvement, incorporation of ideas from Economics Network*
  - *I think I take more time to consider the level of student engagement during each session and I tailor session on a weekly basis to appeal to the specific groups that I am teaching*
  - *General modifications to the content and delivery in response to student feedback*
  - *I am happier about the improvement in my teaching but the lack of time frustrates me because I would like to do and learn more*
- B. Students are happy
- *Student feedback is excellent so things seem OK as they are*
  - *Feedback has been more positive*
- C. Technology helped
- *Addition of IT helped a lot. Much more variety of material*
  - *This is due to developing teaching skills over time, which includes not only becoming more proficient with VLE resources but also developing module content and delivery in the classroom as well*
  - *In the sense that technology enables me to keep pace with rising numbers of students*
  - *Students like the use of Blackboard*

Both positive and negative remarks by the respondents are very important to us and will help to shape our activities in the future.

## **E. Future Networks**

In the last section of the survey we asked lecturers about their attitudes towards plans by the Economics Network to set up a series of networks or community groups for lecturers teaching in specific areas of Economics.

When asked if they will be interested in joining such a network to 'share ideas', nearly three out of four of the respondents agreed to join. They were equally split about the media that could be used for that: e-mails, discussion boards and meetings/workshops.

Slightly fewer respondents were interested in joining the network to 'share materials' (65%). Among those who agree to do so, the majority were happy to share assessment questions (60%); 15% were happy to share worksheets, 11% to share handbooks/teaching programmes, another 11% to share lecture slides and 4% to share handouts.

Respondents interested in joining the network have identified the subject areas and levels at which they are teaching and supplied their e-mail addresses for contacts. The Economics Network will use this information in targeting its future support for lecturers and promoting various events and resources.

## ***F. Conclusions***

The Economics Network's Lecturers Survey is an important step in the information gathering about lecturers' perceptions of teaching, research and technology. Data analysed in this report do not represent the opinions of all Economics lecturers and reflect the views of those who replied to the survey.

The survey has shown that respondents perceive the research/teaching nexus positively and view them as complements in some aspects but substitutes in others. The use of technology in teaching has increased in the past two years and technology is used more creatively. The main reasons for not using it more are similar to the ones two years ago: lack of time and support. A majority of respondents have changed their teaching methods in the past two years due to changes in pedagogy and/or technology. They are more or equally satisfied with the effectiveness of their teaching over the past two years. Three out of four respondents express interest in joining community groups in their specific area of teaching or research to "share ideas", while three out of five would like to join the groups to "share materials".

These results will allow the Economics Network to have a better understanding of what is happening in the community. This will help to shape its events, resources, briefings and publications in support of Economics lecturers.