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Science Position Paper

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Foreword

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Investments in research and innovation are to a considerable extent moderated by the level and quality of higher education. Higher education is an important aspect of the 'absorptive capacity' of societies, the degree to which new knowledge is accessed, understood and used, and a crucial means of realising the ambition of making Europe more innovative. As one of the main 'outlets' for research, not just for social science but for science in general, higher education is one of the most important routes along which research has an impact on society, knowledge flowing via the heads of people into applications in daily life. State-of-the-art insights on teaching scientists how to teach, thus leveraging the knowledge embedded in their research, can be expected to increase the return on investment in science.

In 2009, the Standing Committee for the Social Sciences (SCSS) underlined in its position paper the importance of education as one of the Vital Questions and called for "adequate funding to train and develop the next generations of social scientists who will teach and aid the learning of one-third of Europe's students". In order to teach the next generation of researchers most effectively, the teaching skills of scientists are a crucial variable, to look at, study and improve. Obviously this is not only of interest to the social sciences but an issue of basic importance to all domains of science.

This position paper aims at presenting the state-of-the-art in the field and communicating the research issues that are still open. The overall objective is to increase the visibility of the growing research on improving teaching abilities of scientists through teacher development programmes, in order to increase application of this research and give input for the direction of further research in this area. Furthermore, it should help to increase the awareness of the importance of teacher training and of the quality of teaching in general.

Professor Sir Roderick Floud SCSS Chair

Executive Summary

While effective teaching is vital for student learning in higher education, academics in Europe are not as prepared for their teaching careers as they are for their research. Recent changes in higher education make the development of academics' teaching skills a priority. National and international competition for students forces higher education institutions to market themselves to all potential students. Consequently, these institutions attract students with different levels of knowledge and skills. In some countries, as a result of increasing tuition fees, students demand better educational experiences. New technologies and a move towards online learning make it imperative that academics understand how to best facilitate learning in the digital environment.

Wider societal changes are also taking place in Europe. States are trying to transform their economies into knowledge economies, requiring that research be shared with society. Through teaching, higher education plays an important role in disseminating and promoting the use of research. Social and cultural changes accompany these economic changes: deepening democracy in Europe calls for citizens who are able to think critically and possess other skills and virtues, including, for example, empathy for different cultures. This cultural change also relies upon higher education.

The integration and regionalisation of European higher education demands that student learning experiences are of equally high quality across Europe. The Bologna process, which now recognises the need for improved classroom teaching, aims to increase student mobility. Mobility will only bring desired outcomes if students can expect attractive and competitive education at home and abroad. European efforts at quality assurance call for qualified and competent teaching staff so that the quality

This position paper is an outcome of the European Science Foundation's Exploratory Workshop 'The Impact of Training for Teachers in Higher Education' held 18–20 March 2010 in Bratislava with the participation of 20 international academics engaged in both teacher training and researching teaching and learning in higher education. One of the conclusions of the workshop was that directing attention to teaching in higher education is critical for the future of European higher education. Accordingly, this paper calls the attention of policy makers in Europe to the pressing need to improve the quality of teaching in higher education and makes recommendations at the European, national and institutional levels to achieve this.

of education is enhanced and comparable across the region.

To help all students to learn in and for this changing environment, academics as university teachers need a better understanding of teaching and learning issues as well as to advance their pedagogic competences. Many current methods, such as widespread lecturing to students, relegate students to passivity, tend to focus narrowly on subject knowledge, and, thus, are inadequate. Instead, effective teaching needs to put student learning at the centre of the teaching process.

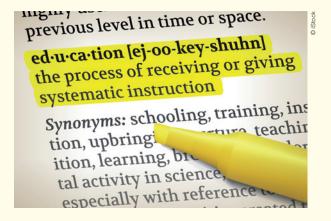
A number of European countries such as the United Kingdom, Ireland, Nordic and the Low Countries have already recognised the importance of classroom teaching for quality education. They have established teacher development programmes for academics and doctoral students, and professional associations to advance teaching and learning in higher education. Similar initiatives are taking place globally, with notable progress in the United States, Australia and Canada.

Contrary to these emerging global trends, in much of Europe, academics continue to rely on their own student experience when teaching. This reinforces subject- and teacher-centred approaches that do not stimulate desired high-quality learning experiences or the kinds of outcomes required by the new European social and economic context.

In order to professionalise academics in Europe as higher education teachers, we recommend that universities that strive for quality education offer educational development opportunities for their teachers. Excellent teachers are made, not born; they become excellent through investment in their teaching abilities. Leaving teachers to learn from trial and error is a waste of time, effort and university resources. Therefore, staff involved in teaching and supporting student learning should be qualified, supported and adequately resourced for that role.

The benefits from educational development programmes far exceed associated costs. The costs are usually relatively low, consisting mainly of staffing expenses for a programme coordinator (director) and several trainers (educational developers) and, possibly, also of a small grants fund for teaching enhancement. Well-designed educational development programmes lead to increased satisfaction of teachers and changes in attitudes, behaviours and teaching practice, as well as improved student ratings of instructors' teaching. Ultimately, such programmes aim to improve the quality of student learning and help to produce competent graduates.

To achieve this, we recommend harmonised action at the European, national, and institutional levels that elevates the importance of effective teaching in higher education. We suggest that policy makers also support existing initiatives. An approach that responds to European imperatives and targets individual, departmental, institutional and country-level initiatives without additional burdens on academic staff workload is the most desirable.



When new teacher development opportunities are introduced, they should be voluntary, rather than compulsory. Early adopters will help ensure the long term success of the programme by serving as models that demonstrate the usefulness of student-centred approaches to teaching and by becoming champions of the approach.

Steps should be taken to:

- define professional standards for higher education teachers
- measure teaching effectiveness and provide constructive feedback for academics
- establish the institutional support base for educational development locally
- recognise teaching excellence in hiring and promotion decisions
- · promote the idea of the 'teacher researcher'
- recognise research on teaching as research activity
- allocate meaningful funding for educational development
- establish a European forum within a currently existing institution that pools and shares resources and existing expertise on educational development across borders

Introduction

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In many European countries, academics are prepared for their role as researchers, but not for their teaching duties. Despite growing evidence for the benefits of development programmes for teachers in higher education, teaching is still viewed as an activity that anyone can do. Thus, not surprisingly, only a few European countries have made substantial investment into enhancing the teaching abilities of their academic staff. In other words, the preparation of university teachers remains largely unsystematic and ad hoc. While formal degree programmes exist to develop and certify competence in research (Masters/PhD) and in some countries there is a clear expectation that academic staff are qualified to this level, the requirement to gain a formal qualification in teaching is not widespread.

Europe has established a European Higher Education Area (EHEA) with the purpose of creating comparable, compatible and coherent systems of higher education, increasing the employability of graduates, and enhancing the international competitiveness of European universities. Establishing professional standards for higher education teaching across Europe, the introduction of student-centred teaching, and the preparation of academics to fulfil these requirements are important steps to achieve these aims. So far, European policies have rarely affected the quality of teaching at the class-room level.

The Bologna process requires universities to assure the free movement of their students and academics between universities in other countries. However, successful implementation of this mobility policy requires that comparable high-quality educational experiences be offered throughout Europe. Offering attractive and competitive content of the curriculum and high-quality teaching

that attracts students to study abroad are important means for ensuring that mobility will not be unidirectional or limited to certain countries.

Some European countries have already made significant progress in providing initial teacher training for postgraduate students and are increasingly offering opportunities for on-going professional development through accredited programmes in teaching and learning for academic staff. They have introduced postgraduate certificate, postgraduate diploma and Masters programmes in teaching and learning in higher education. In addition a growing number of universities are creating incentives for academics to perform highly in teaching through the introduction of institutional award schemes for teaching excellence.

Countries that are most advanced in terms of provision of educational development are those with a longer tradition of student-oriented policies. As a result of the widely diverse academic cultures within Europe, the level of attention to teacher development has been uneven. Interestingly, this training divide is not between East and West, but rather North and South (Pleschová and Simon 2008). While in the UK and in Ireland teacher development initiatives spread mainly as a result of customer-oriented and student-centred approaches to higher education, in Low and in Nordic countries they became products of increased attention to higher education as a driver for economic and societal development.

Importance of Educational Development for European Higher Education

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The purpose of educational development (also called academic development, teacher development or teacher training) is to help create learning environments that enhance educational quality. In the absence of educational development, teachers in higher education tend to base their teaching on their own experience as students. In this way, old teaching methods that focus on the teachers' rather than the students' needs and on the subject matter rather than on the transformation of student knowledge perpetuate from generation to generation. In addition to the questionable effectiveness of such methods, lack of teacher preparation runs counter to political rhetoric, as well as current trends in and expectations of higher education.

Some European policy initiatives have already recognised the need to enhance the quality of teaching.

• The Bologna process has embraced student-centred teaching, quality assurance and quality improvement processes in higher education, student evaluation of teaching and diverse teaching and learning strategies.



• Similarly, the European Standards and Guidelines for Quality Assurance designate teachers as "the single most important learning resource available" to students and unambiguously call for professionalising higher education teaching. They recommend institutions monitor whether teaching staff are qualified and competent and assert that institutions "provide poor teachers with opportunities to improve their skills to an acceptable

level and should have the means to remove them from their teaching duties if they continue to be demonstrably ineffective" (EAQAHE 2005, 17).

- Networks of European quality assurance agencies in higher education have been developed, and discipline-specific benchmark statements on expected learning outcomes have been formulated for all degrees.
- The EU Universities Multirank, initiated in 2009, aims partially at giving more importance to the quality of teaching.

In some European countries, national level policy initiatives have also appeared.

- In Ireland, the National Strategy for Higher Education to 2030, launched in 2011, reiterates a call for professional standards and for continuing professional development of teachers.
- The Higher Education Academy in the UK has developed a Professional Standards Framework (UKPSF) whose central purpose is to enhance the student learning experience, by improving the quality of their teaching and learning support.
- In Nordic countries, Belgium and the Netherlands, many universities have introduced educational development programmes as part of their strategy to enhance the quality of learning. At some of these universities, participation in such a programme is mandatory for getting an academic position. National conferences have been organised on improving the quality of education.

These trends are in harmony with initiatives in other parts of the world.

• In Australia, the Tertiary Education Quality and

Standards Agency contributes to analysis and evaluation of learning and teaching. This Agency registers and evaluates the performance of higher education providers against the new Higher Education Standards Framework.

• In universities in the USA, the DELTA programme by the Center for Integration of Research, Teaching and Learning has become increasingly popular. This programme promotes the development of future faculty members in the natural and social sciences, engineering, and mathematics who are committed to implementing and advancing effective teaching practices for diverse students as part of their professional careers.

In Europe, such declarations and other developments in higher education have reinforced each other, creating demands on teachers for which many are unprepared.

1. Student-centred teaching.

Putting students at the centre of the learning process creates new requirements for academics. First, it demands that they use teaching approaches that they may not be familiar with. Second, academics are now mandated to design learning outcomes and assessment, give and respond to feedback, embed an increasing range of skills into the curriculum, maximise the opportunities associated with classroom diversity and consider ethical issues. It is not feasible to expect academics to carry out these teaching roles effectively without appropriate support in the form of training and development programmes. All of these demands necessitate awareness and understanding of the theoretical underpinnings of teaching and student learning.

2. Knowledge economy and knowledge societies.

Because universities are traditionally engaged in both education and research (and, more recently, the validation of research), they are in a good position to help make research-based knowledge benefit society at large. Collaboration between active researchers and students is one of the best channels for new scholarly knowledge to be spread, contested and advanced in the professional community. Furthermore, learning from the most up-to-date scholarly knowledge and experience is a key ingredient in good teaching. Paradoxically, researchers are expected to introduce the most complex research findings to students who have much less disciplinary knowledge, but in many settings teachers are not offered adequate support to develop such pedagogic competence.

3. Changing conception of education.

Higher education has an important role in shaping our future society. There are calls for a greater emphasis on the holistic development of students, where all aspects of their growth as individuals in society are addressed (Quinlan, 2011). Not only is economic growth linked with the potential for universities to embed employability skills and a range of other generic competencies into the curriculum, but cultural change also relies upon higher education. Free, democratic societies require citizens and leaders who will think and contribute critically – intellectually, scientifically and morally – to their communities.

Higher education is where such citizens and leaders are formed and habits are developed for a lifetime of continued learning and support for scientific knowledge. That is, learning in higher education is more than just acquiring facts. It also includes skills development, helping students to make sense and meaning of the real world, and interpreting and re-interpreting what we know and how we know it. Achieving these aims inevitably necessitates changes to curriculum design and teaching methods, including increased attention to the development of 'soft' or non-disciplinary skills. Again, academics need help if they are to become leaders of this change.

4. Increasingly diverse student body.

As a result of the free movement of people and the existence of student exchange programmes, European higher education institutions are attracting an increasingly diverse student body. This includes higher numbers of international students, mature students, educationally disadvantaged students and students with a disability. These students come with varying degrees of prior knowledge, skills and preparation for higher education. Catering for this evolving student body



requires a greater understanding from teaching staff about the range of approaches to learning. Growing international and inter-institutional competition for students forces institutions to market themselves to all potential students. Those institutions that can ensure the teaching competence of their staff will be at an advantage in the race for students.

5. Diverse teaching staff.

Mobility programmes, together with policies at individual universities that aim to attract the best academics, result in a diverse and international teacher body. Universities need to train teachers with backgrounds from other educational systems so they can make the best use of their competences in the particular local system. Teaching in a foreign language presents another challenge.

6. The changing platform of education.

Immense technological changes are taking place that should be exploited for the benefit of learning in higher education. There is abundant evidence that proper use of technology can enhance quality learning, particularly in part-time students and large enrolment courses, which are becoming prevalent in Europe. At the same time, using these technologies in teaching would also ensure that students are familiarised with technological innovations that they will need in the rest of their lives. Some institutions already provide for online learning and offer appropriate professional development to their teachers. However, many teachers still lack awareness about and skills for using IT effectively for teaching. Therefore, it is imperative that teachers understand how to facilitate learning in a digital environment. Educational developers that specialise in technology-enhanced learning, together with technology support staff, have proven to be valuable allies of teachers improving their courses.



7. Shrinking funding.

The massification of higher education and the global economic crisis since 2007 have reduced levels of state funding for the university sector in both relative and absolute terms, increasing demands on universities to do more with less. Investment in preparing academics for their teaching duties is one way to make universities more efficient.

8. Tuition fees.

In institutions and states where students are paying higher tuition fees, they are demanding a better educational experience in return. At the level of individual courses, teachers need to be aware of the new types of learning outcomes and learning activities to satisfy student demands.

All these developments necessitate a practical response.

Defining Significant Learning and Good Teaching in Higher Education

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The goal of professionalising academics as teachers is to enhance student learning. If teachers are to put students and their learning at the centre of teaching, they must also learn to inquire into their students' learning – to become aware of what students expect and care about, how they perceive the tasks and the learning environment, the approaches they take to learning, and how well they perform. Moreover, teaching calls for cooperation between individual teachers when formulating the programme aims, curriculum and assessment. In sum, teaching requires a scholarly approach, just as academics take a scholarly approach to their disciplinary research. Thus, academics need help to master basic educational principles and to make a conceptual and practical shift to more student-centred approaches to teaching. Moreover, they need support in adapting those principles and approaches in ways that suit their own context.

Teachers can put these principles into practice in a variety of ways. There are a host of active, engaged pedagogies that can be adapted to different disciplines and cultural contexts. For instance, some universities use service learning courses in which a community service project is combined with reading, writing and class discussions to allow students to meet academic goals through reflection on experiences in new settings.

Problem-based learning can be particularly motivating for students as it allows students to apply knowledge in real-world contexts. Such instruction begins with a problem that motivates students to study independently and in small groups to develop the knowledge necessary to analyse and solve the posed problem.

Lecturers who are faced with very large classes can solicit student questions before class (via instructional technologies) and design their lectures accordingly. They can divide their lecture into shorter segments, with interactive breaks in which students briefly explain and interpret key concepts.

Principles of good teaching

Good teaching is that which promotes student learning. From extensive bodies of evidence in the Anglo-American and Nordic contexts we know that students in higher education learn best when there is:

1. Frequent contact with academics in and out of class.

Students benefit from interaction with their teachers. It is motivating and promotes engagement with their studies.

2. Cooperation and collaboration with other students.

Learning is an essentially social activity. Collaboration among students allows them to articulate, test and challenge their assumptions, gives them access to classmates' knowledge and experience and a variety of perspectives on the topic and how to learn it.

3. Active involvement in thinking and learning.

Learning is an active, not a passive process. Learning happens when students read, talk, write, explain, make connections between ideas, try things out and observe the results, analyse, evaluate and organise their knowledge in meaningful ways. Good instruction engages students in processing and using new ideas rather than just listening to or watching their teachers. Teaching is simply the means of promoting student learning, not an end in itself.

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4. Recognition of and critical engagement with prior knowledge and experience.

Students come to higher education with prior knowledge and experience that can help or hinder new learning. If misconceptions and assumptions are identified and challenged, it facilitates deeper understanding. If existing knowledge becomes linked with new information, it can be more easily accessed, retrieved and applied later.

5. Time on task in goal-directed practice.

Students need to put time and energy into their learning. They must practise key skills, attending to particular goals or criteria.

6. Timely, specific feedback that gives guidance about progress and how to improve.

Feedback on student performances (e.g. writing an essay, giving a presentation, answering a question, demonstrating a skill) is one of the most powerful methods of instruction. Feedback helps to clarify what good performance looks like, and provides information so that students can monitor their own performance and close the gap between the desired and actual performance.

7. A challenging, yet supportive, learning environment.

Students do best when teachers set and communicate high expectations for them. However, as they feel challenged, they also need emotional, social and intellectual support.

8. Relevance to students' goals and intrinsic interests.

Students are more motivated when they have some control over their learning and when they see its relevance to their own lives, goals and interests. Motivation also depends upon them expecting to succeed in the task and perceiving a supportive environment.

9. Encouragement to and practice in becoming independent in their learning.

Self-directed, independent learners are proficient at assessing a task and its requirements, planning their approach, evaluating their own knowledge base and (learning) needs, identifying and effectively using resources, applying and monitoring various strategies and, finally, assessing their own performance against internalised performance standards.

While academics can learn a variety of different teaching methods that embody key educational principles (see the side bar), they must also:

- Learn how to use knowledge about their students' experiences and perspectives to design their courses and teaching.
- 2. Be clear about their expectations of students and what they want students to learn.
- 3. Prioritise the knowledge, skills, values and attitudes they focus on.
- 4. Align instructional activities and assessments with intended learning outcomes.
- Adjust their teaching according to students' needs and progress.
- 6. Use student feedback and reflection to progressively improve their courses.
- 7. Collaborate with other academics in these activities. Teaching is a collective responsibility.

If teachers – and the universities in which they work – adopt a more student-centred view of teaching as encapsulated in this section, their students will learn more deeply, and they are more likely to be intellectually and morally transformed by their university experience. But the higher education sector needs to be willing to promote this kind of significant learning and help teachers learn how to achieve those aims. It must create environments in which student learning of this kind can take place and in which teachers are rewarded for engaging in such practices. It will not happen by itself.

Educational Development: helping academics and universities promote significant student learning

Many countries, including the USA, Australia, Canada, UK, Ireland, Nordic countries, The Netherlands and Belgium have well-established educational development practices. However, educational development is not evenly available to academics and universities across Europe. If all of Europe is to benefit from the transformative potential of higher education, investment must be made in educational development across Europe.

While it is academics who actually improve teaching, professional educational developers (EDs) play an important role as they help teachers to develop their pedagogic competences. EDs are organised in teaching and learning centres, but also as departments or in human resource units. This variation reflects the many strategies used: alliances with academic leaders result in top-down strategies, but EDs may also work bottom-up through teachers as individuals, in groups, and networks in departments and/or programmes. They support study directors, programme leaders, deans and vice chancellors/rectors/presidents (see Table 1) in their initiatives to improve quality of education.

Table 1. Typical educational development activities

Teach courses and workshops for teachers (incl. postgraduate students, newly appointed and more experienced academics)	5) Research student and professional learning and organisational development in higher education	9) Contribute during evaluation of teaching and quality assurance processes
2) Consult teachers and other individuals holding positions such as study directors, heads of departments, deans etc.	6) Develop new supportive teaching and learning structures, e.g. reward systems for good teachers	10) Aid in policy and strategy development, nationally and in institutions and departments
Participate in curriculum development processes	7) Arrange teaching and learning conferences	11) Support students' enculturation and development of study strategies
Administer teaching and learning funds	8) Assess pedagogical merits during hiring of new teaching staff and/or promotion	12) Secure personal professional development through scholarship, research and professional networks

Sources: Clegg, 2009; Gosling, 2006; MacDonald, 2009; Sorcinelli et al., 2006.

Effective Educational Development

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Three decades of educational development work has shown how to best prepare academics to teach and how to best enhance teaching and learning in universities.

First, educational developers work with individual teachers to help them improve their teaching. Well-designed, sustained programmes of study rather than short, one-off workshops - (Ramsden, 1994) have been shown to impact teachers' thinking and conceptions of teaching and learning (Postareff, Lindblom-Ylänne and Nevgi, 2007; Stes, Coertjens and Van Petegem, 2010) and, in turn, their teaching practices (Stes, Clement and Van Petegem, 2007). Programmes which integrate ideas about how students learn and how assessment and teaching affect learning, lead to more effective teaching than programmes based only on improving teaching skills. In these effective programmes, classroom strategies and theory are closely intertwined. The most successful programmes are related to participants' own needs, as well as offering opportunities for interaction with colleagues.

Secondly, learning and change require supportive contexts. Thus, effective educational development also involves creating cultures in which academics are encouraged to experiment with student-centred curricula and teaching methods. There are various levers for culture change, including incentives such as grants, formal/informal recognition and reward structures, peer learning and exchange forums within departments, disciplines and universities. EDs work to build a shared language and understanding about student learning. Because of their varied disciplinary background, EDs habitually take the role of brokers, carrying information and innovations in teaching across disciplinary boundaries.

Thirdly, in many countries universities have

introduced student evaluation of teaching as a way of ensuring student input into teaching enhancement. While this is a laudable first step, collecting and collating student reactions to teaching is not sufficient. Information about academics' teaching should be collected from other sources and, in order to create educational change, teachers need access to and the opportunity to discuss evaluation results to consider how to address weaknesses and build on strengths. Educational developers can help with this interpretation and action planning.

And fourthly, successful educational development programmes are regularly evaluated for their impact and restructured accordingly.

Training for educational developers

Institutions that introduce an educational development programme must consider whom to engage in this work. Professionals with qualifications in pedagogy for primary and secondary education may not be the right candidates for these posts, as working with students and staff in higher education requires different approaches and methods. In the past, educational developers typically started as academics in their particular discipline and became enthusiastic about teaching. They learnt the essence of educational development through running workshops and other activities for their colleagues. Today, a number of programmes offer qualifications for the profession of educational development. In some countries, universities offer Master's degrees in Higher Education either as a full-time or as a part-time programmes.

Professional associations also further the work and training of educational developers. The Staff and Educational Development Association (SEDA) in the UK regularly organises three-day summer schools

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for new educational developers. SEDA and another British institution, the Higher Education Academy (HEA), prepare training programmes and offer professional recognition for teaching. The HEA UK offers university managers access to consultants, assists institutions with data collection necessary to evaluate teaching and educational development programmes, and fosters disciplinary networking.

Continuing education opportunities also exist as exemplified by the Swedish Strategic Educational Development programme that brought together educational developers from across Sweden in 2004/2005 and 2005/2006 and offered a project-based environment for participants to work on problems relating to their professions. Conferences such as those of SEDA, the International Consortium for Educational Development (ICED), the HEA UK, International Society for Scholarship of Teaching and Learning (ISSOTL), or the National Academy for Integration of Research, Teaching and Learning (NAIRTL, Ireland) workshops, and online courses offer further possibilities for academic developers to enhance their knowledge and skills.

Some opportunities are available in Central Eastern Europe, too, such as the four-day workshop entitled Enhancing Teaching and Learning and Faculty Development at Universities in Europe offered annually by Central European University and its partner institutions.

Recommendations



In order to professionalise academics as teachers in higher education, we recommend elevating teaching and learning on the agenda of higher education policy-making. We propose concerted action at the European, national, and institutional levels that creates opportunities and incentives for academics to raise their interest in and improve their classroom teaching. This means that educational development should not be made compulsory in the short term or in the early phases of these efforts. Instead, teachers should be offered an opportunity and shown the associated benefits. We advocate a slower-paced, progressive introduction of educational development that first creates champions among the faculty and demonstrates the impact of student-centred teaching at the local level. Any action furthering good teaching should take into account the identity of academics as researchers. Thus programmes need to support rather than dictate participants' efforts to enhance their teaching and student learning. Our recommendations are to:

1. Define professional standards for higher education teachers.

The standards should allow for recognising and benchmarking teaching and learning support roles within higher education and articulate the professional knowledge base, for example, as was recently done in the UK.

2. Measure teaching effectiveness.

Building research evidence related to teaching, learning and educational development creates a base for improving existing practice. In the future, more systematic data collection and analysis is required. Some areas that need further exploration include the investigation of the temporal impact of educational

development programmes on teachers' conceptions, teachers' behaviour, and student learning; how quality assurance practices influence classroom teaching; what types of interventions and programmes are the most effective when desiring a given impact on a particular group, such as PhD students; and how different educational systems and hiring practices influence change in teachers' attitudes and behaviour (Simon and Pleschová, 2012).

3. Establish educational development at the appropriate levels (institutional, regional, national), which includes the following:

- Establish educational development programmes. Education can only be enhanced if the quality of classroom teaching is improved. Excellence in teaching is a result of improving pedagogic knowledge and abilities. Simply learning by doing threatens to entrench traditional practices, which are no longer adequate in the changing context.
- Create educational development units. Through offering teacher development programmes, educational development units can systematically help teachers to enhance their pedagogic abilities. They can provide teachers with efficient and friendly feedback on teaching and promote sharing of results from research about student learning among teachers. This way, teachers gain insights into those aspects of their teaching that need to be improved. Educational development may be localised at the department, faculty or university level, yet regional, national and supranational training opportunities are also advisable, especially through disciplinary educational development.
- Train educational developers. When new educational development programmes and units are created, finding qualified staff is one of the key



challenges. Here, cooperation with colleagues from institutions with established educational development practice is essential.

4. Strengthen the identity of academics as teachers around the concept of 'teacher-researchers'.

Although the emphasis may be on either teaching or research for academic staff, academics should be encouraged to engage in both, as there is a symbiotic relationship between them. As part of this,

- Recognise teaching excellence in hiring and promotion decisions. We can expect most academics to invest in teaching only if such investment is valued in the profession. To be hired or promoted, academics who teach should demonstrate qualification both as researchers and as teachers. The mutual recognition of acquired teaching qualifications and skills across states and higher education institutions is also desirable.
- Recognise research on teaching and learning as research activity. Researching teaching and learning issues involves similar methodological and research expertise to subject-based research. Therefore, it should be considered as a legitimate research activity.
- Integrate educational development into the existing academic workload. Participation in teacher development should be included among the responsibilities of the academic staff without cre-

ating any further workload. Otherwise teaching and research responsibilities could be antagonised and the efforts to improve education could fail.

5. Provide funding.

We advocate substantial long-term funding for teaching-related projects. We also recommend that funding opportunities be available at multiple levels (institutional, state, European). If no additional funding is available, then some of the existing research funding should be allocated for this purpose.

6. Establish a European forum.

In order to facilitate the implementation of these recommendations at the departmental, university, national and European level, we propose establishing a new forum. This forum should create incentives and harness already existing expertise while involving a greater number of countries and institutions in teaching-related issues. Such a European forum, focusing solely on the issues concerning European higher education and responding specifically to European contexts, does not exist currently.

An already existing organisation, such as the European University Association (EUA), could provide the necessary institutional and financial support for the forum.

Proposed responsibilities of the new European forum for higher education teacher development

Stimulate discussion.

It should be a place where professors, educational developers and higher education managers could discuss issues related to classroom teaching and educational development. An annual "SoTL-Europe" conference, and regular workshops could be particularly useful to this end.

Pool resources and provide expertise.

We propose that a European-level effort be based on matching existing expertise with local needs. To achieve this, maintaining a database on expertise relating to educational development would be essential. Additionally, the capacity to respond to local (national or institutional) needs by matching institutions and states with experts in the requested issues relating to teaching and learning is necessary.

• Utilise existing efforts and capacities.

This new forum would work with and through national institutions, teaching and learning organisations where they exist, and national and European disciplinary organisations.

Facilitate cross-national mentoring programmes.

The forum should provide the capacity to match institutions or individuals for cross-national mentoring programmes.

Administer and award funding for teaching projects.

Funding should be provided on multiple levels and for a selected number of varied projects. As part of this, the forum should:

- encourage teaching consortiums for semester or year-long exchange programmes for educational developers and teachers and for other joint teaching-related initiatives,
- stimulate individual efforts by providing small funds for teaching innovations and evidencebased educational development, in particular for teachers who have difficulty getting funding elsewhere.
- allocate funding to the regular evaluation of impact of educational development programmes and their redesign,
- promote projects based on the forum's expertise and capacities, such as mentoring projects.

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Annex

ESF Exploratory Workshop

'The Impact of Training for Teachers in Higher Education'

Bratislava (Slovak Republic), 18-20 March 2010

Programme

Day 1: Thursday 18 March 2010

The scope and impact of existing training programmes – an international survey:

Goals, content, participation and participants' motivation, subject-specific vs. interdisciplinary training, results and effects

14:00

Welcome address, purpose of workshop: G. Pleschová

14:15

Presentation of the European Science Foundation (ESF): B. Kiss, ESF Standing Committee for Social Sciences (SCSS)

Session 1:

Approaches to training in European Higher Education. National and international model

Purpose of the session: To find out

- what type of teacher training currently exists internationally (especially in Europe), and to what extent is such training research-based or "evidence-driven"
- what evidence exists for the effectiveness of such programmes
- 3) what methods might be used to establish or investigate programme effectiveness e.g. their effects on teacher attitudes and teaching practices, on teacher effectiveness, and on student learning

Chair: J. Murphy Record-keeper: J. Renc-Roe

14:30

The influence of courses in university pedagogy at the University of Helsinki on educators 'teaching and students' learning. 2001-2009 experience: A. Nevgi

14:50

Academic practice workshops at the European University Institute as a part of Max Weber Programme. Evidence from the praxis: A. Frijdal

15:10

The design and effectiveness of CEU (Central European University) approach to teacher trainingtwo models of practice: J. Renc-Roe

15:30

From beginning teachers to educational leaders: Tensions and possibilities in educational development from a career stage perspective: K. Quinlan (Oxford University)

15:50

Break

16:10

'Fit-for-purpose': Designing and running an accredited CPD (Continuing Professional Development) route at University of Ulster to meet institutional and staff needs: S. Maguire

16:30

Two education development strategies: A Problembased learning module and academic writers' retreats at University College Dublin: T. Barrett

16:50

The effects of different forms of educational courses on university teachers' teaching practice at the University of Tartu: M. Karm

17:10

Discussion resulting in a critical evaluation of the impact of existing programmes on participants' teaching and their students' learning

18:45

Dinner

Day 2: Friday 19 March 2010

Effectiveness of training:

Impact on curriculum, on teacher effectiveness, on student learning

Morning session:

Designing an effective teacher training programme

Purpose of the session: Determining what requirements should a teacher-training programmes live up to discussing systemic effects of pedagogic training

Chair: Ch. Knapper Record-keeper: E. Simon

8:40

The proof of the pudding: to make teachers actually change something to improve their own teaching practice: P. Lauvas (University of Oslo)

9:00

The impact of the integration and internationalisation of HE systems on teaching and learning:

E. Berndtson (University of Helsinki)

9.20

Eastern European Transformations in Academic Identity and Practice – the Internationalisation factor: J. Renc-Roe (Central European University)

9:40

Break

'The Impact of Training for Teachers in Higher Education'

10:00

High quality learner-centred teaching, teamwork and aligned assessment. An opportunity for the students to become democratically engaged in learning:

D. Jacques (Oxford Brookes University)

10:20

Systemic effect of pedagogic training: T. Roxa (Lund University)

10:40

Discussion resulting in suggesting a model strategy for teacher development in HE

12:00

Lunch

Afternoon session: two parallel tracks

Track 1:

Measuring the impact of teacher development. Critical appraisal of existing methods

Purpose of the track: Critical assessment of existing methods for measuring the effects of staff development (SWOT analysis)

Chair: K. Quinlan

Record-keeper: J. Renc-Roe

13:40

Incorporating research on learning into teacher training programmes: Ch. Knapper (Queen's University)

14:00

Accredited programmes in teaching and learning in higher education – some Irish perspectives on measuring impact: J. Murphy (University College Cork)

14:20

New lecturers' views of assessment: L. Norton (Hope University)

14:40

Quantitative and qualitative methods in examining the impact of teacher development: K. Triggwell (University of Sydney)

15:00

Break

15:20

Surveying self-efficacy of teachers using ATI questionnaire and interviews with educators:
A. Nevgi (University of Helsinki)

15:40

Discussion resulting in SWOT analysis of existing methods measuring the effects of educational development

Brainstorming about possible research projects

Track 2:

Role of IT in stimulating teachers' engagement and efficiency of teaching

Purpose of the track: to answer following questions:

- To what extent might training, teaching and learning reflect the increasing variety of technologies students use in their daily lives, from I-pods to mobile phones?
- 2) How do teachers react to contemporary requirements and/or new possibilities offered by the introduction of advanced technology into the classroom?
- 3) Are teachers sufficiently equipped with IT skills? How might the introduction of technologies stimulate or detract from teachers' engagement and confidence in increased efficiency of teaching?

Chair: Ch. Rabl

Record-keeper: V. Davies

14:00

Bridging the Gap: developing academic staff in Technology-enhanced Learning (TEL):
V. Davies (University of Ulster)

14:20

Using Social Media to Enhance Student Learning in Political Science: C. Goldsmith (De Montfort University Leicester)

14:40

Advantages and weaknesses of ITCs in teaching and learning: S. LaBranche (Institute of Political Science Grenoble)

15:00

Break

15:20

Media Zoo as a Catalyst for Institutional Change: Introducing Learning Technologies to Teaching Staff at the University of Leicester: S. Kear – via Adobe (University of Leicester) https://connect.le.ac.uk/ mediazoo/

15:40

Discussion resulting in concluding how the introduction of IT can stimulate or detract from teachers' engagement and confidence in increased efficiency of teaching

17:00

Preparing draft proposal to be discussed next day (convenors)

19:00

Dinner

Day 3: Saturday 20 March 2010

Future directions: What makes teachers in HE to develop, what is the impact of teacher training

Format: Debate aimed at preparing research proposal(s), later work in groups if more than one research project is to be prepared

Chair: G. Pleschová Record-keeper: E. Simon

Session 1

Scientific objectives of the research project, project methodology

Purpose of the session:

To elaborate a collaborative research initiative that will focus on evaluating the impact of teacher training on student learning with a stress on methodology

8:30

Presentation of draft proposal

9:00

Discussion

10:30

Break

Session 2:

Involved institutions and researchers, resources and research environment

10:50

Discussion

13:00

Lunch

14:30

Concluding remarks

Participants

- Gabriela Pleschová, *Eurea, Slovak Republic* (Convenor)
- Eszter Simon, Slovak Academy of Sciences/University of Szeged (Co-convenor)
- Joanna Renc-Roe, *Central European University, Hungary* (Co-convenor)
- Terry Barrett, University College Dublin, Ireland
- Erkki Berndtson, University of Helsinki, Finland
- Vicky Davies, University of Ulster, United Kingdom
- Andreas Frijdal, European University Institute, Italy
- Chris Goldsmith, *De Montfort University, United Kingdom*
- David Jaques, Oxford Brookes University, United Kingdom
- Mari Karm, University of Tartu, Estonia
- Balász Kiss, European Science Foundation, France (ESF Representative)
- Christopher Knapper, Queen's University, Canada
- Stéphane Labranche, *Pierre-Mendès-France University, France*
- Per Lauvås, University of Oslo, Norway
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- Jennifer Murphy, University College Cork, Ireland
- Anne Nevgi, University of Helsinki, Finland
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