

ISABEL HUET  
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# EXCELLENCE IN TEACHING AND LEARNING IN HIGHER EDUCATION

INSTITUTIONAL POLICIES,  
RESEARCH AND PRACTICES  
IN EUROPE

IMPRESA DA UNIVERSIDADE DE COIMBRA  
COIMBRA UNIVERSITY PRESS

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The book is organised in four interrelated themes: (1) policy and quality; (2) professionalisation of teaching and academic development; (3) research and teaching nexus; and (4) pedagogy and practice.

Enjoy reading the book!



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**BRIEF NOTE ABOUT THE EDITORS  
AND THE ‘IDEA’ BEHIND THE BOOK**

The initial ‘idea’ for the book emerged during the seminar *Sharing of Innovative Pedagogical Practices* that occurred at the University of Coimbra (Portugal) in 2018. Like all ‘good ideas’, this one originated in a conversation between colleagues from the University of Coimbra and the University of West London in the United Kingdom. The ‘idea’ of this book was to move away from sharing experiences related to teaching and learning in higher education in just one or two countries, but instead to organise a more European view about the policy, research and teaching practices that are shaping the way our students learn, academics teach and do research. We have a total of 16 chapters from academics in Portugal, the United Kingdom, Ireland, Sweden, the Netherlands, Spain, Italy, and the Czech Republic.

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Enjoy reading the book!

The editors: Isabel, Teresa and Fátima

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## PREFACE

Organised, structured education has been around since the times of Plato and Socrates. What might be recognised as Higher or Tertiary Education has evolved all over the world with the Al-Qarawiyyin University near Fez in Morocco being considered the oldest recognisable institution. Over the years Universities have evolved with a range of missions and purposes with institutions in Bologna, Oxford Salamanca and Coimbra being considered amongst the oldest in the world. In the early days, Universities were the domain of the wealthy who focused on exploring ideas and theories to advance our knowledge in a whole range of theoretical areas. The development of the ‘modern’ University is attributed to Humboldt in the 1800’s who envisaged that universities should be based on scientific logic, reasoning and research. Designed to meet the needs of rapid industrialisation, the focus of such institutions was the promotion and application of pure sciences to boost productivity through the modernisation of industrial processes. A central tenet of this model – freedom- appeared to be more beneficial to academics than to the students who wished for more structure and better guidance in their studies; a plea we can still recognise today.

With the dawning of the ‘information age’, the objectives of the Humboldtian model have become almost obsolete in many countries. In the early 1900’s, Dewey stated that students should be ‘apprenticed into collaborative meaning-making processes, they must be allowed to appropriate and reinvent, in terms that they can understand’ (Mayer, 2008, p.7). This concept of constructivism and that of social constructivism (proposed by Vygotsky in the early 1900’s) linked learning with the quality of thought

and the enhancement of culture – making higher education a much broader ‘church’ with endless possibilities (see chapter 11 and 12).

As we progressed through the twentieth century, a post-war baby boom saw many Governments realise the need to expand higher education provision and widen access (see chapter 2). There was a growing economic dependence on higher education, but no real system in place to ensure that the provision in one institution was of the same standard as that provided in another. Since the sixties, in the UK, Governments have been trying to enhance the quality of HE and to equalise academic standards across providers. This approach was also the driving concept behind the Bologna process in 1999 (and further developed through its amendments and additions throughout the 2000’s). The impact was to rationalise the structure and standards of tertiary education across the European Union and affiliated countries, and through schemes such as Erasmus and Erasmus+, extend this goal to other countries in central Europe, Africa and South America, whilst working with colleagues elsewhere such as the USA and Australasia who have their own processes, but similar goals (see chapter 1). With the creation of the European Higher Education Area, this standardisation became even more important in supporting the free movement of people amongst countries and regions. The emphases of institutional strategies became the need for equality of opportunity and for quality in delivery.

Throughout the twenty first century, employers around the world have been saying that universities are not creating graduates with the skills industry requires (see chapter 16). Thus, rather than developing innovative, creative thinkers who, through research, are driving forward our knowledge and understanding of the world around us, tertiary education is mass producing graduates with current disciplinary knowledge. This massification has been driven in many instances by the economic needs of the institution due to changes in how higher education is funded. In other instances, it is due to the raised and rightful expectation of entitlement to higher education. However, with massification comes the challenge of maintaining standards and quality and this has taxed countries and institutions the world over.

Indeed, in many countries, ‘quality codes’ have been developed with some measure of external agency control to try to raise standards and ensure that all students achieve at least a minimum level of proficiency in their subjects. The international network for quality assurance agencies in higher education (INQAAHE) has more than 300 members worldwide and UNESCO has developed a framework for action which supports their premise that education is a human right and access must be matched by quality.

Europe (and here I include the UK) and other countries around the World have developed expectations of excellence in teaching, but the community has struggled to define teaching excellence and how to measure it. In the UK for example, the Teaching Excellence and Student Outcomes Framework was introduced as a trial in 2016. Its measures for teaching excellence depended on an independent, national survey of final year undergraduate students which depended on their perception of their experiences of teaching. Many countries have similar surveys, and none is without its critics. The biggest challenge is: ‘if you cannot define what teaching excellence looks like, how can you measure or assess it’. Perhaps the contributions in this book may help to answer this thorny question (see chapters 3 and 4). No-one has yet established an acceptable definition of teaching excellence but in order to attain it (whatever ‘it’ may be), institutions have introduced some measure of ‘teacher development’.

Previously, university academic staff may have been recruited on the strength of their subject knowledge and their research ability rather than on their ability to teach, but the drive for quality education has led to countries to introduce the notion of academic or professional development. This can range from informal opportunities to develop knowledge of teaching theories and/or practices, to formal academic qualifications and national recognition schemes (see chapters 5 and 6). The most widely accepted of these national schemes in that run by the Advance HE organisation in the UK. The UK Professional Standards Framework (UKPSF) allows for recognition of individuals involved in the student experience according to their role in the organisation. It requires people to demonstrate commitment to a set of key values as well as excellence

in teaching and curriculum design through knowledge of theory and current academic practice. It also requires individuals to demonstrate leadership locally and more widely as well as influencing the practice of others through mentoring, active membership of relevant networks and contribution to the knowledge base of higher education teaching and learning. The scheme has been accepted around the world with members being accredited to deliver their own training and award schemes. Achievement of this recognition has been worked into promotion criteria and role descriptions, placing a strong emphasis on strength in teaching.

Whilst there is legislation to support the development of excellence, higher education is notoriously slow at implementing change (the obvious exception being the sterling effort expended in 2020 to move teaching online for all students owing to the Covid 19 pandemic). Part of the reason for this is that students sign up for 3 or 4 years for their undergraduate studies (which may be even longer where part-time students are involved) and they expect to receive the course they chose. Changes require extensive dialogue with affected students and their consensus. Another reason may be that many academics have entered higher education through research or practice routes and so their skills in teaching and understanding learning may not be particularly well developed. They often 'teach the way they were taught' and changing from didactic delivery to a student-centred approach (advocated in many countries) can be extremely challenging and require tremendous support (see chapter 14 and 15).

Recognition of the challenges modern higher education presents to academic staff led to the introduction in some countries of academic development units designed to help staff understand how students learn and how different pedagogies and pedagogic research can address that (see chapter 7). Whilst today, a wide range of recognition and reward schemes exist around the world, they just increase the challenge to academics in attaining a reasonable work-life balance (see chapter 9). The need for a commitment to continuing professional development is recognised by many countries and individual institutions, many of which have introduced their own way of addressing this need, starting with the

supervision of PhD students (who may go on to an academic career), and moving through those new to teaching, those requiring development as leaders and mentors and those responsible for the leadership and governance of the organisation.

In a way this brings us full circle. We now focus on quality supervision of postgraduate students, (which often includes developing their teaching skills with a view to attaining academic careers) in which their research can not only influence their own teaching, but also inform the curriculum so that students are at the cutting edge of their discipline when they graduate (see chapter 13). This linking of research and higher education was a fundamental concept of the Humboldtian model but today we also listen to the students and ensure excellence in teaching and learning underpins their educational journey (see chapters 8 and 10).

This book is designed to explore how different countries and institutions in Europe deal with some of the key challenges in higher education today. It is not designed to cover every aspect but to initiate conversations to bring about greater awareness of what is possible and what makes a difference in attaining excellence in teaching and learning in higher education. It does not explore the challenges that Covid 19 has raised for every institution or particularly look at excellence in teaching online. There are many outstanding papers and books already in this field. Our experiences in the last year, have taught us that whilst students can learn online, they want to be 'at' University with all the opportunities and experiences that brings. Also, it has shown us that whilst learning online can be effective, students still desire that opportunity to socially construct their own knowledge and understanding of a subject. I believe this book has given us some insight into what excellent teaching might be!

Professor Lesley-Jane Eales-Reynolds, University of West London.

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THEME 1

**POLICY AND QUALITY**

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## **HOW ARE UNIVERSITY TEACHING, STUDENTS AND ACADEMICS AFFECTED BY POLICY CLUSTERS? A CASE STUDY OF ENGLAND, UK, 2010-2020**

**ABSTRACT:** This chapter examines the anticipated and unintended effects on university education and academics in England of a cluster of five ideologically-driven, recent national policies or policy developments, two generic, three specific to higher education and all with significant impact on university education and academics in the last five years. The approach adopted can be characterised as a public sociology approach (Burawoy, 2005), in this instance using a sociological perspective to make sense of the effects of policies on public institutions. The chapter explores to what extent academics taking on the role of policy actors (Ball et al., 2011b) are mobilised by the impact of each of these policies and also what scope there is for manoeuvre by would-be policy actors. The focus on policy effects experienced in English HE, whether intended or unintended, aims at alerting academics to the importance of being aware of a range of national policy landscapes, not just those closely linked to higher education, that could have a significant impact on university education, as well as what and how academics teach, and students learn. The approach used here would be applicable to other countries than England, so the chapter is not simply providing a one-off case study but could be used to undertake a similar study in another country.

**Keywords:** Universities, teaching, Brexit, marketisation, final salary pensions, Teaching Excellence Framework, Covid 19, policy actors

### **1. Introduction**

The chapter's main aim is to demonstrate how a small cluster of recent national policies and policy events in England (2010-2020), not all of them specifically targeted at higher education, are significantly affecting university academics, HE teaching and students. The second aim is to discuss whether and if so how, academics have taken on the role of

policy actors (Ball et al., 2011b) in relation to any of these policies or policy events. The analysis draws on Burawoy's idea of policy sociology as a way of addressing significant societal challenges, whilst also encouraging academics to operate in public as well as higher education contexts (Burawoy, 2005). At the same time, the use of the concept of policy here is not the standard one in the education policy field, which mainly concentrates on analysing the content and discourse found in the text of numerous policy documents (Saarinen & Ursin, 2012). This is because the analysis extends to two major events, one national (the Brexit referendum) but with policy formation following, as well as various national and international consequences, and the other a global public health pandemic (Covid 19), marked by many (sometimes contradictory) different policies of UK nation states, all attempting to deal with the effects of the virus crisis for social, cultural, economic, and political life. The focus here is on how England responded to the virus's effects on everyday living in ways which affected higher education. The investigation of policy in higher education is, as already mentioned, often defined as an activity which consists of documentary analysis but also taking into account the broader social and political space within which policy formation and interpretation take place (Rizvi & Lingard, 2010). A short section on the political and ideological background in England from 2010 - 2020 is also provided. For reasons related to brevity and lack of space, the chapter is not based on a deep textual documentary analysis but rather on a broader exploration of how policies such as the Teaching Excellence Framework and developments like Brexit which require policies to be produced that have relevance for HE, then lead to a range of expected and unexpected consequences for academics and for teaching.

A literature already exists on the impact of national and transnational policies on both teaching and research in universities but this is a literature largely about policies directly connected to HE, which tends to concentrate on large scale higher education reforms (Kaiser et al., 2014), high-cost funding interventions such as the German Excellence research initiative (Fischer & Kampkotter, 2017) or long-term developments like the Bologna process (Elias et al., 2012; Veiga & Neave, 2015). Further-

more, the effects of policies on teaching, staff and students *per se* are often treated as subsidiary to shifts in structural issues like qualifications, learning credits and quality assurance processes or student recruitment. Here the approach is a hybrid one, which includes major policy events which are societal concerns, as well as changes to HE in England.

## 2. Theoretical framing

The analysis here is based on England, which despite the UK's formal departure from the EU in January 2020, remains geographically and culturally close to Europe. The chapter provides an approach to policy sociology in higher education which can be used in other European countries (or elsewhere), to examine how clusters of policies closely related to university education and broader national policies but with implications for universities, can affect HE teaching, students and academics in myriad ways not necessarily anticipated by policy makers. Unintended effects of policies are a longstanding component of the literature on policy implementation (Krücken, 2014; Margetts et al., 2010), since no matter how sophisticated the policy, there will always be unanticipated consequences. Krücken (2014) draws on Merton's (1936) work on purposive social action in order to apply it to organisations. Merton sets out five possible causes of unintended consequences, ranging from error, ignorance, and immediate interest, to values and self-defeating prophecies (Merton, 1936); here, however, the *causes* of unintended consequences are of less interest than the *effects*.

Both those ostensibly responsible for policy implementation and those affected by those policies have a role to play in mediating effects, as noted in a study of how schoolteachers respond to policy (Ball et al., 2011b), either as passive policy subjects or in a more demanding role as a policy actor. However, as the authors point out 'Actors ... are positioned differently and take up different positions in relation to policy, including positions of indifference or avoidance or irrelevance' (ibid, p. 625). Ball et al. (2011) also suggest a degree of nuancing of policy

actor roles ranging from narrating policy to translating it or developing critical policy perspectives. A piece of research drawing on interviews with European early career researchers working in the academic field of higher education, found that whilst some of these researchers also regarded themselves as policy actors (particularly those who entered the field as mature adults after a different career), others were content to be policy subjects without interest in shaping policies relevant to their professional work (Ashwin et al., 2016). It is suggested here that this differentiation between policy actors and policy subjects may apply to academics more widely.

### **3. The political and ideological background**

The political and ideological background to the policy analysis provided here is notable for the gradual shifting to the right of the political spectrum by successive governments in the UK over the last 10 years (2010-2020). In relation to HE, there has been a determined effort to encourage private-for-profit providers of higher education at the expense of well-established public HE institutions and to make the HE system as marketised as possible, with high fees and an expectation of quick payback of student loans by graduates in well paid jobs. HE teaching also started to come under more scrutiny in the 2015 election manifesto, when the notion of a Teaching Excellence Framework was first suggested.

In early 2010, the Labour Party were still in office under Prime Minister (PM) Gordon Brown, who was responsible for introducing the additional taxation of final salary pension schemes by reducing the amount of the lifetime and annual pension contribution allowances. It was also a Labour Government that originally introduced higher level home/EU tuition fees for Bachelors degrees in 2004 under Prime Minister Tony Blair. In the May 2010 General Election, no party won an overall majority, and a coalition of Conservatives and Liberal Democrats was put together which held power under Conservative Prime Minister David Cameron. It was this coalition government that effectively removed almost all public funding for Bach-

elors and Masters degrees and introduced the £9000 + home/EU fees for Bachelors degrees. In the 2015 General Election, Cameron won a majority of just 12 seats for the Conservatives. Whilst it was PM Cameron who was keen on the Brexit Referendum being held (he felt under pressure from the relatively new Brexit Party led by Nigel Farage, who bizarrely was a member of the European Parliament he despised so much), when the result in the Referendum of June 2016 was announced, with a narrow majority of 52% voting in favour and 48% against, it became clear that Cameron, who had staked his political career on a Remain majority in the ballot, would have to go. Interestingly, none of the prominent Conservatives identified with the Leave vote, including Boris Johnson and Michael Gove, wanted to stand as party leader and PM, so it was left to a slightly less right of centre candidate (and Remain voter) Teresa May to stand for and win the posts of Conservative Party Leader and Prime Minister in July 2016.

Though there was no requirement for another general election until 2020, May felt that if she was to deliver a successful UK exit from the EU, she ideally needed a larger majority. She called a snap election in June 2017, when the party managed to lose a good many Conservative seats and she ended up with the Conservative party having the largest number of seats but as a minority government, which was then bolstered by a deal done by May with the ten Northern Ireland parliamentary members of the Democratic Unionist Party, a hard line right-wing Protestant party who bargained to get extra funding for Northern Ireland on the basis of supporting the Conservatives in the House of Commons. May triggered Article 50 to leave the EU in March 2017. However, she then struggled to get any agreement on the strategy and Withdrawal Agreement to exit the EU, especially making no progress on the agreement (known as the Backstop) for managing post-Brexit trade on the island of Ireland between Northern Ireland and the Republic of Ireland, which has well over 300 crossing points. May, after failing three times to get the EU Withdrawal Agreement through a Parliamentary vote, resigned as Prime Minister.

In July 2019, Boris Johnson beat all his Conservative colleagues to become Leader of the party and PM. He promised the UK would leave

the EU by 31<sup>st</sup> October 2019. This didn't happen until 31<sup>st</sup> January 2020, after a landslide victory with an 80-seat majority by the Conservatives in a December 2019 general election, coming after a series of difficult times in Parliament when Johnson prorogued Parliament (effectively shut it down) for a long time to stop the campaign against a 'no deal' Brexit, an action which was pursued in the courts as illegal by those opposed to the PM. The UK finally left the EU on January 31<sup>st</sup> 2020, with a transitional year to 31<sup>st</sup> December 2020 in which nothing changed. Meanwhile, in the autumn of 2019, almost all moderate MPs had either been expelled from the Conservative Party or deselected from standing for election in December 2020. The pro-Brexit Conservative MPs grouping in the oddly named European Research Group (which does no research and hates Europe) began to occupy more power over the Parliamentary Conservative party, with its leader Jacob Rees Mogg becoming Leader of the House. The swathe of former pupils from the UK top private school Eton College, who are Cabinet members, says a lot about the values and beliefs of the new Conservative Parliamentary party. Then in spring 2020 along came Covid 19. The poor handling of the virus by Prime Minister Johnson and his team, particularly in respect of delayed lockdown, allowing elderly patients not tested for the virus to be discharged from hospital back into care homes and the lack of protective clothing for health care professionals, led to the UK having the most deaths from the virus of any European country between mid-February and the end of May 2020 (Duncan et al., 2020). Since then, the winter of 2020-2021 has seen even higher death numbers from Covid 19, with the UK total since the beginning of the pandemic being 84,767 in mid-January 2021.

#### **4. The policies selected**

The five policies referred to in the chapter are chosen because they are topical, they have shared underlying ideological elements around the purposes of public universities and about international alliances, they have had a very significant effect on English university education and

academics in the last few years, and they have the potential to significantly reconfigure the higher education landscape in England. Two examples are very broad areas of policy application affecting many realms of life as well as education, the other three are either specific to higher education or have had a specific effect on HE. The five policies or policy fields are: Brexit; the marketisation of the English HE system; the impact of radical changes to the UK University Superannuation Scheme (USS) pension scheme, following the phasing out of final salary pension schemes, which particularly affected the English research-intensive universities, leading to a series of strikes action in the 2017-2018 and 2019-2020 academic years; the introduction of the UK Teaching Excellence Framework Survey (TEF) in 2016; and finally, the immediate effects of the English Covid 19 pandemic lockdown policies on universities' futures. There are a series of questions which will be used to structure the discussion of each policy hereafter. These are: what are the main features of the policy and why might it be relevant to teaching in universities; how does each policy impact on HE teaching and are there any unintended effects on HE teaching; who are the crucial HE policy actors and what are they doing? These questions constitute a useful *aide memoire* or framework for analysing the effect of recent policies on university education and academics, not just in England but in other countries too. We now move onto a more detailed analysis of the five cases.

#### **4.1. Case 1: Brexit**

What are the features of the policy? Brexit is not a policy *per se*, rather it is a series of policies which together form part of the UK EU Withdrawal Agreement and the trade deal with the EU. However, the right wing, anti-democratic ideological direction of travel, for example, excluding many journalists from key political briefings in 2020 and having an unelected special advisor, Dominic Cummings, making key political decisions (Dunleavy, 2020), since the 2019 General Election and the advent of Boris Johnson as Prime Minister, have turned Brexit into

a series of policy statements. These move away from the idea of a close relationship with the EU that Johnson's predecessor Teresa May had supported, towards a deliberate 'no deal' or 'thin deal' on trade and a distant relationship with the EU; an approach which has already had and will continue to have, a very deep and lasting impact on the English and the rest of the UK's HE systems.

How has Brexit affected HE in England? There are both expected and unexpected effects. Beginning with the Referendum in June 2016, which resulted in a narrow majority vote in favour of leaving the EU (52% in favour of leave, 48% in favour of remain), UK universities have been dealing with the many consequences of the Brexit vote. These have included a massive outflow of EU academic staff back to other European countries, around 11,000 since June 2016 (Nixon, 2019). In addition, UK professional qualifications and degrees will no longer be recognised in the EU, thus limiting the wider employment options of anyone graduating from a UK university. There is also likely to be a significant decline in EU students as after the transition year 2020 (except in Scotland), they will no longer be able to pay home fees (Study UK, 2020). There has also been an increase in UK media and general public intolerance (already present) of anyone who uses more than one language or appears to originate from another country (McGuire, 2019; Rzepnikowska, 2019). Excellent academic researchers and teachers have left the UK (Nixon, 2019), worried that the settled status available to EU citizens, who have lived in the UK for more than five years, comes with no solid proof to show at borders and/or concerned that research funding opportunities have been massively reduced (Jack, 2018). After the 2020-21 academic year, it is likely EU applicants will have to pay full international fees in England, Wales and Northern Ireland (Scotland is following a different approach). In theory, English universities are free to make their own EU fees decisions from the 2021-2022 financial year. However, given the collapse of international recruitment in 2020 due to Covid19 and questions over which universities will survive the financial consequences (Drayton & Waltmann, 2020b; Popov & Isard, 2020), it is highly unlikely that any

will offer reduced fees to new EU or EEA applicants from the 2021-2022 academic year onwards.

Brexit has also affected the curriculum significantly, as modern European languages continue to decline in popularity in schools (Tinsley, 2019), which means less demand at degree level. European Studies are gradually disappearing, along with European law and other European-oriented topics, even though geographically the UK remains close to Europe. If UK academics decide they can no longer easily carry out research in Europe or collaborate with European academics, they will also be less likely to teach anything connected with Europe either. Courtois and Veiga (2019) in a recent multi-country European-wide study, argue that the Brexit process has also resulted in collaboration between EU and UK universities being seen in economic, pragmatic, and instrumental terms, rather than being based on cultural diversity and national variety. Universities UK, the Vice-Chancellors (Rectors) organisation, campaigned for retaining EU links for higher education in the post 2016 period but to little avail. Continued Erasmus+ participation in student/staff mobility and other schemes was excluded from the December 2020 trade deal, ostensibly as it was considered too expensive but also probably because Erasmus mobility schemes involve freedom of movement across national borders, which the Conservative government oppose. Under the Brexit trade deal signed on Christmas Eve 2020, the UK will still have associate member access to EU Horizon research funding. However, overall, it is not just EU students and European curricula which will be lost but also the interculturality and multilingualism of having EU students in the UK, both on full-time degree programmes and on Erasmus+ exchange visits. Of course, international students from other non-EU countries will probably continue to come to study in the UK, but the effects of these students on teaching have been much less marked than that of European cultures and languages, particularly in the Arts and Humanities. For example, except for the establishment of Confucius Centres in some English universities (Zhou & Luk, 2016), the large numbers of Chinese students studying in England have not had a dramatic impact on the content of the curriculum.

Also, with the advent of Covid 19, it is not yet clear how many Chinese students will still want to enter the English HE system in the future.

Who has been active in this policy field? Since June 2016, many UK academics have become policy actors (Ball et al., 2011b) opposing Brexit, whether by undertaking Brexit-related research, writing articles or books, keeping blogs (e.g. [chrisgreymbrexitblog.blogspot.com](http://chrisgreymbrexitblog.blogspot.com)) or debating on social media. Brexit also coincided with a period in UK universities' history when the marketisation of English HE became much more pronounced and the high salaries of Vice-Chancellors (Rectors) attracted adverse academic and political attention (Boden & Rowlands, 2020a; Walker et al., 2019). In addition, high university fees have also encouraged public disapproval of English higher education in general. The reportage of academics actively opposing Brexit has just reinforced the Conservative party view that all academics are left-wing (Rayner, 2017). Overall, this is still an unfinished story about how to downgrade a once world class HE system. Loss of European mobility schemes and the mass departure of EU students and EU staff are not positive elements for either English university students or research and teaching. The battle against Brexit ended for universities when the UK finally left the EU on 31<sup>st</sup> January 2020, at least for a generation. However, it is entirely possible that a favourable independence vote in Scotland, in the future, could lead to Scotland reapplying to re-join the EU, and a uniting of Northern Ireland and the Irish Republic (already an EU Member State) is probably closer now than at any time in recent decades.

#### **4.2. Case 2: HE System Marketisation**

What are the main features of the policy? Marketisation is not a new development in English HE but since the late 1990s, marketisation of the English, Welsh and Northern Irish HE systems has been growing. This growth accelerated from 2010 onwards. In Scotland, a different path has been followed, with a lesser degree of marketisation and although there are (much lower) fees for Scottish and EU undergraduate students, these

are fully covered by the Student Awards Agency for Scotland. English, Northern Irish and Welsh undergraduate students, as well as other international students, are charged higher fees. Fees for home/EU undergraduate students in England were first introduced in 1998-9 under a Labour government, following the Dearing Report on the future of HE (National Committee of Inquiry into Higher Education 1997), alongside offering student loans repayable after graduation. In 2004, still under a Labour government, an Act of Parliament raised home/EU fees (with effect from 2006-7). In 2010, following a report about a sustainable higher education system (Browne Report, 2010), a coalition Tory/Liberal Democrat government introduced even higher home/EU fees, capped at £9000 a year and most public money used to fund Bachelors and Masters degree programmes disappeared. However, universities charging over £6000 were required to offer bursaries to support widening HE access.

In 2016, a government campaign to encourage the growth of private for-profit ‘challenger’ institutions alongside ‘incumbent’ public universities (even though there were already surplus places) began with the publication of a White Paper on HE and the knowledge economy (Department for Business Innovation and Skills, 2016). There are only a few large for-profit providers in the UK – such as BPP and the University of Law – but many smaller ones, often undertaking undergraduate teaching to students from non-traditional backgrounds, charging well below the £9000+ fee threshold. The 2017 Higher Education and Research Act brought changes to how the English HE system is governed, including a new HE regulator, the Office for Students (OfS). OfS is the new English university regulator, which replaced the Higher Education Funding Council for England (HEFCE) in January 2018 (Filippakou & Tapper, 2019). Instead of supporting and acting as a buffer between universities and government as HEFCE did, OfS acts in a very legalistic way, registering institutions and overseeing the marketised funding regime with an iron rod and threats to fine universities who do something ‘wrong’, such as making unconditional offers to applicants. The concept of HE quality assurance (QA) has shifted from one which uses periodic institutional audit visits and a detailed quality handbook and standards and procedures for universities,

somewhat similar QA arrangements to the rest of Europe, to one which is described as risk-based, although seemingly this has not worked as well as it might. OfS has strongly promoted the ‘Challenger’ for-profit university concept as an important development for English HE. However, in 2019, a high profile and apparently hitherto very successful for-profit provider, Greenwich School of Management (GSM), ceased operating at very short notice due to financial problems (Jack & Hale, 2019). This was a big shock for the Office for Students (OfS) because if GSM, which was one of the bigger providers, could fail so unexpectedly dramatically, so could other new for-profit providers.

What are the effects of marketisation on academics and teaching? These are a mix of anticipated and unanticipated effects. Marketisation has been accompanied by an intensification of managerialism (Deem 2017a; Deem et al., 2007) and a closely aligned neo-liberal ideology (Du & Irving, 2019), both of which emphasise that public universities are corporate businesses, students are customers and academic staff are service providers to be performance-managed in respect of both teaching and research. This potentially changes the relationship between students and academics into one more closely resembling that of department store shoppers and shop assistants, rather than an educational institution. The degree becomes regarded as a private, not a public ‘good’ (Marginson, 2018), relevant only to the individual consumer, not society at large. Some student ‘customers’ do not even see themselves as responsible for their own learning, as they believe they have ‘paid’ for a degree, preferably an upper second or first-class degree (or distinction in a Masters). Such students think that it is therefore the responsibility of the ‘service provider’ (formerly educator) to ensure that learning takes place. Thus, learning becomes a commodity which is ‘delivered’ rather than taught and the curriculum becomes something to be consumed rather than co-created. Degrees are not seen as interesting in themselves but as qualifications leading to high paid graduate jobs. Learning is regarded as what is necessary to pass coursework and exams, rather than a form of personal development. While not every English student sees themselves as a consumer (Tomlinson, 2016), consumerist views

are less common in free or low-fee HE systems, as work comparing the views of German and English undergraduates about their choice of university, understanding of academic work, and experience of their degree programmes shows (Budd, 2016). Consumer orientation can also present barriers to learning, as a survey of over 600 undergraduates in English HEIs noted, where those with the greatest consumer orientation performed less well in their studies than those without such an orientation (Bunce et al., 2017).

Consumerism is well embedded in England's HE system in other ways too. Higher education applicants can consult a variety of national league tables, both official ones (such as the annual National Student Survey or NSS, for final year undergraduates, which has been running since 2005) and commercial ones, such as the Guardian Newspaper League Tables and the Complete University Guide. There are also international rankings of higher education institutions and disciplines (QS, Shanghai, Times Higher), although these tend to use proxies for assessing the quality of teaching such as staff/student ratios. There is also publicly collated institution-specific data on English university programmes and the careers of university graduates from different courses (Moss, 2016). This data includes a website called Unistats which was first developed in 2007. In 2012, a new data source called Key Information Sets (KIS) was added to Unistats, with a greater amount of institutional data, including relevant NSS data on student satisfaction. In 2019, the Unistats website was renamed Discover Uni (<https://discoveruni.gov.uk>). As Komljenovic notes, devices such as Unistats, KIS and league tables are part of an attempt at transparency for university applicants but are also there to support the marketisation of English HE (Komljenovic, 2020). The idea is that HE applicants can decide which institution they want to attend based on up-to-date information on factors important to them. Various league tables run by UK newspapers about the 'best' courses in particular subjects are also part of what is available. However, the amount of information available may be overwhelming to would-be undergraduates. Furthermore, we know that gender and ethnicity of teachers can affect student satisfaction survey outcomes such as NSS, and that those who

teach 'difficult' topics or don't give generous marks may also receive low marks (MacNell et al., 2014; Subtirelu, 2015).

What have been the effects of the new higher fees? In England, the higher fees have led to an explosion of spending on new buildings on university campuses (Hillman et al., 2018), as well as very high salaries for Vice Chancellors (Rectors) (Boden & Rowlands, 2020a; Walker et al., 2019). There has been rather less investment in teachers (this was clearly intentional or the financial arrangements would have been differently organised), with many English undergraduates taught at least some of the time by temporary staff, estimated in 2016-17 to represent 49% of all UK university teachers (Universities and Colleges Union, 2016), with precarity now a way of life for such teachers (Allmer, 2018; O'Keefe & Courtois, 2019). UK HE Student recruitment is now frequently run by marketing staff who are less interested in education than promoting and protecting their institutional 'brand', which is evident from increased emphasis on institutional 'branding' (Rutter et al., 2016). The efforts to protect students from disadvantaged backgrounds in HE using bursaries and scholarships have not been fully successful, especially in respect of degree student experience and outcomes (Callender & Wilkinson, 2013; Harrison et al., 2017). Marketisation and fear of student debt have led to encouragement to students to take vocational and STEM programmes rather than studying humanities or social sciences, as the Higher Educational Statistics Agency data for 2018-19 shows (Higher Education Statistical Agency, 2019). However, the evidence is that social science and humanities degrees can also lead to good jobs, although gender also makes a difference to this (Britton et al., 2020; Gebreiter, 2019). There is talk of 'low quality' courses ranging from media arts to health and social care programmes (McKie 2020) and suggestions that universities may be forced to close such courses or pay part of the cost, even though such courses often recruit well, and their graduates have important societal value. Covid 19 has shown how important social care is to society, despite its being badly paid (the only reason it is labelled 'low quality'). Because of the high fees and the competition between HE 'providers', the UK Competition and Markets Authority also effectively control course curricula by

stating how and when curricular material may be changed (as it must have the consent of existing students/applicants or be done a long time in advance). This is a big constraint on academics' freedom to change their course content. CMA's presence in the HE field also effectively rules out significant inter-institutional collaboration on undergraduate degrees outside of federal structures such as the University of London, on grounds of impugning competition, with cross-institutional collaboration much more evident in less marketised fields such as doctoral education (Deem et al., 2015; Lunt et al., 2013).

Policy action is more difficult to organise in relation to marketisation than in some other arenas. Marketisation itself discourages institutional policy actors except senior management, as marketisation is now very deeply embedded in the English HE system. Although marketisation as an ideological approach can be attacked, reducing its permeation is much more difficult, although there have been attempts in England and elsewhere to develop co-operative forms of higher education as an alternative way of running post-secondary education (Neary & Winn, 2017; Wright et al., 2011). However, in the next section it is possible to see that recent academic strike action has gone well beyond the pensions dispute, and explored the impact on staff and students of the corporate university (Bok, 2004).

#### **4.3. Case 3: University Superannuation Scheme Pensions (USS) and University and College Union (UCU) strikes**

What was the pensions policy which ultimately led to a very extensive set of strikes by academics in 2018, 2019 and 2020? The discussion here refers to the effects of a tax policy change in the late 2000s by a Labour Government which decided to tax final salary pensions (where the value of the pension is linked to the final salary earned before retirement), at the time still typically common in the public service professions, by gradually reducing the size of the permitted Lifetime and Annual Allowances against tax. This over time would mean that those enrolled in such pensions would find themselves potentially liable to pay large sums in tax

annually whilst still contributing to the pension and would pay an even higher tax when taking their pension (55% rate of tax against 40 or 45%).

How and why did the pensions issue impact upon academics and teaching? Were there any unexpected effects? For many academics and university administrators in UK HE, for some decades, it was the existence of a final salary pension that compensated for years of restricted salary increases. The USS pension scheme is generally only found in the research-intensive UK universities, with the former polytechnics mostly (in England) still members of the Teachers' Pension Scheme, which is a government-run public scheme also including school teachers. USS closed its final salary pension scheme in 2011 and moved to smaller career-average pensions (initially with defined benefits, so that members knew how much they would receive on retirement), whilst simultaneously, universities have also raised their employer *and* member pension contributions. In 2017 a valuation of the USS scheme assets showed a growing deficit and employers proposed to remove the defined benefits element in favour of (even higher) defined staff *contributions (and the amount of the pension is hence not fixed)*. This led to significant concerns about worsening of academic terms and conditions.

The policy activism about USS pensions and failures of negotiation then led to lengthy strike action. In 2018, a 14-day UCU strike at member UK universities succeeded in overturning the decisions to raise staff contributions and an independent Joint Expert Panel arrived at a new valuation which would allow the defined benefits to be retained without significant rises in member contributions. However, the USS trustees did not fully accept the new valuation and member institutions initiated a rise in member contributions again. Hence in autumn 2019 and in spring 2020 UCU took further strike action for a sustained period.

Who and where were the policy actors? The policy activity was not confined to academics. Whilst some students were upset and annoyed at effectively losing many weeks of teaching at key points in their programmes, other students joined picket lines and so-called 'Teach-outs' were arranged as alternative teaching sessions at some universities which supported the strike. There was plenty of indication that academics were

becoming policy actors in this process. Though all three strikes were directly linked to the pensions dispute, UCU was additionally concerned about salaries and the growing precarity of many temporary university academic staff on fixed term or zero hours contracts. Attention was also drawn to the neo-liberal underpinning of UK universities, the decline in autonomy of academic staff in teaching and research and the growth of consumer culture amongst students more interested in gaining a degree than in learning *per se*. The strikes both disrupted teaching and drew attention to the fate of many temporary teachers (insecurity, low pay, often multiple part time jobs, no chance ever of a decent pension) and to the heavy workload carried by established teachers and even put in place a system of alternative teaching slots and content for UCU members and students. The content was an attempt at offering a decolonialised higher education curriculum (Bhambra et al., 2018), some of the debate about which began in South Africa from 2015 onwards, with violent student protests about the colonial ‘heritage’ and university fees. The Teach-outs were more free-flowing (Boden & Rowlands, 2020a), open to all, not assessed by a three-hour examination and fitted well with what the UK National Union of Students had also been campaigning for in its “Why is my curriculum white?” exercise (El Magd, 2016).

Whilst not an entirely unintended consequence of the pensions dispute, focusing on the problematic corporate culture of much of UK higher education was important in allowing the pensions dispute to situate itself in a broader context of critiques of the English HE system. In addition, the strikes and picket lines became fertile ground for discussing whether UK universities need to change the way that teaching, and research are undertaken and the work conditions of academics (Bergfeld, 2018). There is every indication that academic policy actors were very active during the three periods of the strike and that they have remained so since, especially since no long-term solutions to the pensions crisis or to academic precarity have yet been put forward. These last two challenges will be exacerbated by the effects of the Covid 19 pandemic on university finances (Drayton & Waltmann, 2020b; Popov & Isard, 2020).

#### 4.4. Case 4: The Teaching Excellence Framework

What are the main features of The Teaching Excellence Framework (TEF)? TEF was a policy first mentioned in the Tory party election manifesto for the 2015 UK general election. It was seen as a way of rebalancing of the relationship between teaching and research in higher education which was thought to have become too research-focused, a way of holding universities to account for how they spent student fee income, a mechanism for ensuring widening participation was working and a means of assessing teaching excellence. The last-named attribute was soon questioned, as measures such as the number of teaching staff in each institution with a teaching qualification and the percentage of teaching staff on temporary or casual contracts have never been included and there is no observation of actual teaching, as there used to be in Quality Assurance Agency university subject audits in the late 20<sup>th</sup> century and very early 21<sup>st</sup> century. In 2017, the TEF was renamed the Teaching Excellence and Student Outcomes Framework (TESOF), with lessening emphasis on the actual quality of teaching and more on the extent to which teaching quality was presumed to affect graduate earnings and employment status, despite any evidence of a link. The Graduate Outcomes Survey (introduced in 2018) and the Longitudinal Education Outcomes Survey (introduced in 2017) do not just identify what jobs graduates are in, but also how much they get paid. This sounds innocuous but because it is linked to tax records, it can be used to show which jobs lead to fast payback of student loans because of high graduate salaries. The evidence on life-time earnings from a degree compared with those not having a degree is about social class, gender, degree subjects and types of programme studied, not teaching quality *per se*. Thus, a recent longitudinal study of graduate salaries (Britton et al., 2020) noted that the subject or programme studied is very important, with creative arts and languages graduates often earning little more than non-graduates whilst law, economics and medicine often lead to higher returns for male graduates. Women undertaking teacher training and nursing do not have high average returns but get a positive lifetime salary return. However,

the danger of over-emphasising high paying graduate jobs is that courses with low salary returns will be in danger of disappearing, despite their societal and/or cultural relevance.

What have been the effects of TEF on universities in England? TEF itself was originally meant to allow universities who achieved a particular accredited status to raise their first-degree fees above the rate of inflation, but this element was suspended during and after the Augar Review of the costs of higher education (Hubble & Bolton, 2019). This happened around the time in 2019 that Teresa May resigned as Tory party leader and Prime Minister. The lack of direct financial input into teaching and teachers via TEF is in contrast to the Research Excellence Framework, which does distribute some additional so-called Quality Related (QR) funding to the most successful universities in each exercise, much of which finds its way into salaries or support for research. Even if TEF had continued down the path of allowing universities with a TEF accreditation to charge higher undergraduate fees, it is highly unlikely that much of that money, if any, would have found its way to excellent teachers. Research by HEPI in 2018 suggested that most money was spent on academic staff (not necessarily only or mainly permanent teachers), course equipment, and staff-related items, buildings, careers, administration and access support and items like Vice Chancellor pay/travel and professional services, with often less than 20% going to teaching infrastructure and the student experience (Hillman et al., 2018; Skoulding, 2018).

Data for assessing TEF outcomes (which come in Bronze, Silver and Gold for those awarded) has included National Student Survey data (an annual satisfaction survey of final year undergraduates), data on progression and outcomes of students from disadvantaged backgrounds or with protected characteristics (e.g. sex, gender, ethnicity, disability), information on employment after graduation and a self-assessment document from each institution. The TEF exercises to date have focused on institutions, although there was intended to be a subject-based exercise (already piloted) that has temporarily been shelved due to the Corona Virus outbreak, and also possibly because there has been a remarkably high turnover in Education and Higher Education government ministers

recently. TEF went through a series of stages, from TEF 1 (2016) when it was just a paper exercise for those that had previously undergone an institutional quality audit through to TEF 4 (2019), none of which were compulsory even in England. TEF is largely an English exercise but is/was open to universities from the other three UK countries. However, if subject-based TEF ever happens, then the English HE regulating body the Office for Students (OfS), made possible by the 2017 Higher Education Act, will make it a requirement that all English universities enter. Unlike the Research Excellence Framework (REF) which is dominated by the golden triangle institutions of Oxford, Cambridge and Imperial College, and members of the elite Russell Group of institutions, the results of TEF to date have not always favoured the Russell Group research-intensive universities for Gold Awards (Baird & Deem, 2019).

There are some more positive elements of TEF, particularly related to the tracking of progression of certain categories of students such as black and minority ethnic students, mature students, students with disabilities and those from disadvantaged backgrounds. Furthermore, TEF has caused more attention to be paid to teaching in England's universities by managers, whereas in the past most English universities, even the former polytechnics, suffered from academic drift and wanted to excel in research rather than teaching (Nixon, 2013). Unfortunately, much of the new attention to teaching has gone into supporting the bureaucracy associated with TEF entry, rather than encouraging and supporting excellent teachers. Some reports on TEF have praised the exercise (Beech, 2017) or taken a fairly neutral stance (Universities UK, 2017). However, the lack of TEF focus on teaching excellence factors, which was raised in a Higher Education Academy debate prior to the TEF proposals being finalised (Land & Gordon, 2015) and the drift to employment data which does not recognise how graduates get jobs (Frankham, 2017), are significant shortcomings. Even the metrics in use for TEF are questionable as those chosen constitute an index rather than a causal variable and do not make use of intelligent accountability approaches which emphasise self-governance, independent judgments

*and* internal evaluation (Baird & Deem, 2019). Ashwin also notes that if appeals or rapid re-applications can overturn previous TEF results over a relatively short time scale, it raises questions about the longevity and value of TEF outcomes (Ashwin, 2018). Queries have also been raised about TEF's possibly deleterious effect on academic identities (Perkins, 2018). Thus, someone's personal teaching reputation and skill is now framed largely not by their own expertise in teaching but by the TEF score their department or institution achieves. This could be positive or negative but may be particularly problematic for excellent teachers working in Bronze TEF institutions.

Who are the academic policy actors who want to interact with the TEF apparatus? Unlike REF and its predecessor Research Assessment Exercise (RAE), which have regularly been researched and critiqued by assessment panel members since RAE began in 1986, very little, if any, of the academic literature on TEF to date has been written by TEF assessors. Thus, the policy activity is largely from educational researchers, educational developers and ordinary academic staff who dislike the way in which TEF professes an emphasis on teaching excellence *per se*, but actually spends a fair amount of time on aspects like the size of graduate salaries which are not directly linked to teaching excellence. There is a growing set of critical work on TEF (some mentioned here) but in the main this does not address how to shift policy on HE teaching, responsibility for which is now split between the Office for Students (a legalistic regulator which does not act as a buffer between universities and government, unlike its predecessor the Higher Education Funding Council for England), the Department for Education and possibly also the Department for Business, Energy & Industrial Strategy. Advance HE, a recently merged professional body incorporating the former Higher Education Academy (HEA), Equality Challenge Unit (ECU) and the Leadership Foundation for Higher Education (LFHE), initially (as the HEA) tried to shape TEF from its first appearance in 2015, beginning with a set of critical papers (Deem, 2015; Land & Gordon, 2015; Tsui, 2015), but soon became co-opted to the cause and stopped resisting TEF.

#### 4.5. Case 5: Covid 19

What is the policy element in Covid 19? Like Brexit, the Covid 19 pandemic of 2020 is not a policy in itself, but national and local policies to deal with it have had to be put in place in every country in the world that is affected. These policies range from public health, businesses, school and university closures and locking down the public in their homes for periods of weeks at a time, in order to reduce the rate of virus transmission. In the UK responsibility is shared by all four countries, but the English government initially at least, has dominated the discussion. Education in general has been hard hit, with schools partially closed (left open for pupils with particular educational needs and the children of key workers) and exams cancelled (Burgess & Sievertsen, 2020). For universities in Europe, as well as elsewhere, the pandemic and the speed of the initial lockdowns in most European countries (by winter 2020-21 Europe was in the second wave of enhanced lockdowns) and the physical closure of university campuses in mid academic year in spring 2020 caused massive disruption. Research labs and classrooms were shut, some international students were stranded on almost deserted campuses and unable to travel home as borders were closed and flights and ferries cancelled, manual staff put on furlough, exams suspended and face-to-face teaching not possible and replaced by hastily put together online learning. Highly marketised systems like the English one are particularly vulnerable to unexpected events as universities have become used to high levels of tuition fee income and also income from extensive university-owned accommodation blocks used both by students and (in vacations) by external conferences. English universities quickly turned to remote online learning but started to re-open in England in summer 2020, though most exams were abandoned in favour of open book or multiple choice assessments. In the autumn universities operated with Covid-proofing arrangements on campus and both online and face-to-face learning but by December, another almost complete national lockdown was put in place and universities were once again facing campus closures. Many universities had planned programmes starting in January 2021, particularly aimed at

international students but no-one knows whether international students in particular will want to come to the UK anymore, given its high death rates from Covid (the highest in Europe).

What have been the effects of national and local lockdown policies? Many UK, European and other universities had planned blended learning for the first term/semester of the 2020-2021 academic year, with both face-to-face and online materials available but few institutions have any useful experience of distance teaching learning, which is not identical to online or digital teaching and learning (Crawford et al., 2020). It is not enough just to record standard 50-minute lectures or provide quizzes online, students have to be motivated and engaged in interactivity if learning is to take place. The rapid switch to online learning is also leading to dysfunctionality and disturbances to academics' pedagogic roles as well as to their lives, as a recent post Covid lockdown survey of 1148 UK university staff showed (Watermeyer et al., 2020). Academics stuck in their homes are using video-conferencing to teach and tutor but are facing many problems in doing this, from lack of space or proper IT equipment and having to home-educate children whose schools have closed, to poor broadband connections and never switching off whilst working from home. Doctoral researchers are struggling to keep going, with many archives and non-digitised resources still closed, experiments disrupted, fieldwork plans having to be shelved due to travel restrictions and working in cramped conditions. These problems also directly affect HE teaching, as many doctoral researchers are also part time teachers. As with other temporary HE teachers, many have found their fixed-term contracts cancelled or not renewed over the summer of 2020, so remaining academic staff have been taking on much more teaching and marking as well as blended or online learning. Continuing students have faced new assessment methods such as 24-hour take home papers. Dissertation and project work for undergraduate and Masters courses, as well as field courses in subjects like Earth sciences and geography has been disrupted or curtailed. Practical and vocational courses have struggled with remote teaching and cancellation of placements or movement of these online.

For those English universities with high past numbers of international students, particularly on one-year Masters degrees, there are likely to be huge financial losses as students from countries like China stay away (Drayton & Waltmann, 2020a; Drayton & Waltmann, 2020b). Those students of all nationalities that are recruited, may not want to live on university campuses for fear of catching the virus; the English residential model of HE no longer looks so attractive as it once did, compared with the limited residential capacity of many European universities. The balance between research and teaching will probably shift towards the latter but not for good reasons, just because it is more immediate and brings in more money. Some English (and other UK) universities may not survive the financial meltdown (Drayton & Waltmann, 2020a; Drayton & Waltmann, 2020b; Popov & Isard, 2020) and others may shrink considerably or move to blended and online teaching as their main approach (Bolton & Hubble, 2020).

Covid 19 is also affecting who can become a university student, as UK-wide, national school leaving exams were cancelled for summer 2020. When the standardised results of teacher assessments of expected grades appeared, in both England and in Scotland, extensive public concerns were expressed by university applicants and their teachers at the way exam boards had standardised exam grades. The response was that this was to ensure against too many students passing the exams. Across the UK, an algorithm was used partly based on exam centre teacher-predicted grades, but which paid more attention to the grades the school or college had obtained in the previous year than to the student's potential, so elite schools were privileged over schools in working class locations. Where those taking a subject in one school exceeded 15, no notice was taken of teacher assessment at all, so only the algorithm was used. Furthermore, if no-one from a given school had obtained an A\* top mark in a particular subject last year, no-one could get one now. Also, if in summer 2019, three people in one school got an unclassified pass in a subject, then three students in that school had to be given that grade in 2020, regardless of predictions. Scotland responded to the exam results protests almost immediately by changing the basis of the calculations, but

England took longer to respond. Finally, the school exams regulator for England, OFQUAL, after suggesting a second appeals procedure which appeared to make things worse (using mock exams or teacher assessment, whichever was the lower), said it would award all candidates their teacher-assessed grades, but by then many university courses in specialist fields like medicine (whose recruitment was only un-capped for 2020-2021 by the Education Secretary on 17th August, several days after the A levels came out) were already full. It is interesting that some other European countries have responded to high numbers passing university entry exams by creating many new university places, as in France where record numbers passed their Baccalaureate exams in 2020 (Radio France Internationale, 2020).

It is hard for academic policy actors to respond to the dramatic repositioning of forms of teaching and learning caused by Covid 19 except on a local level. Since December 2019, the UK parliament has had a right-wing political party in power with a large majority, so there is no avenue to a different way of managing the pandemic. The SAGE government body which managed the crisis has been criticised for a lack of public health experts and for ignoring scientific evidence when easing lockdown arrangements by both scientists and the public (Rutter, 2020). The initial attempts of government to ‘help’ universities with their admissions problems by trying to control recruitment side-lined other UK countries, forgot about teaching quality concerns, and ignored widening participation commitments. The regular WONKHE blog said on June 8<sup>th</sup> 2020:

‘The main plank of the Department for Education (DfE) attempt to stabilise the 2020 undergraduate recruitment cycle arguably manages to make the cycle significantly less stable, all the while working to undo decades of work on widening access, undermining any pretence TEF had as a measure of teaching quality in higher education, and trampling all over devolved policymaking’.

Also, with the likelihood of university redundancies due to financial problems (Drayton & Waltmann, 2020b), some of those academics who might have fought for a different less marketised and more human form

of HE may not still be working in universities by the end of the 2020-2021 academic year. There will be a myriad of other unintended consequences for university teaching and learning from Covid 19, despite the positive role of universities in researching many dimensions of the virus and its wider social implications, but those unintended consequences are still to emerge.

## **5. Concluding thoughts**

The chapter's main aim has been to demonstrate how a small number of recent national policies or policy event clusters in England active in the period 2010-2021, not all of them specifically targeted at higher education, have significantly affected university academics, HE teaching and students. The second aim has been to discuss whether and if so how and to what extent, academics have taken on the role of policy actors (Ball et al., 2011b) in relation to any of these policies. Together these aims also provide a framework which could be applied to other European countries. There has also been discussion of the right of centre political and ideological context in which the policies were formed. The analysis has included three complex policies, marketisation of HE in England, the phasing out of final salary pensions and an ensuing series of strikes, and the emergence of the Teaching Excellence Framework and two major 'events', one national (the Brexit referendum), with policy formation following, and the other a global public health pandemic (Covid 19). The latter was marked by a number of different policies, including national lockdowns of the population, which among other things led to a rapid pivot towards online learning in all English HE institutions, as well as threats to the continuation and financial stability of some of those universities.

As has been demonstrated here, both policies directly connected with HE and those that are more generic, have the capability to significantly affect academic work and identities, shape which students enter HE, affect the value of teaching and how teaching is organised and influence which teaching programmes are prized, as well as whether inter-institutional

teaching takes place. All the policies considered have elements of both intended *and* unintended consequences. Brexit has changed which academics work in the system, which students are likely to be studying, elements of the curriculum and student and staff exchanges, to mention just a few things. Marketisation has prioritised higher education largely as a business and emphasised that a degree is only of value to the individual student as a route to a job which will permit repayment of the student loan alone, not a form of personal development. The UCU strikes have drawn attention not only to pitiful future pensions for academics but to the changing purposes and priorities of contemporary HE, the intense performance management regimes under which universities operate, the gap between senior managers and those they manage, the high pay of Vice Chancellors, and the growing precarity of more and more academic jobs. In relation to some policies or policy clusters, such as Brexit and the UCU strike, there has been a significant, if not always effective, role for academics as policy actors trying to achieve change around particular matters. In relation to other more heterogeneous policies, such as marketisation, it has been more difficult to mobilise effective forms of resistance since the policies are complex, layered, enshrined in legislation such as the 2017 Higher Education and Research Act and cumulative in effect.

The Teaching Excellence Framework, whilst having a few positive features such as focusing on progression of students from minority and disadvantaged backgrounds, has been extensively critiqued by academic researchers for its problematic metrics, its greater focus on student outcomes into well paid graduate jobs (not necessarily all of high societal value) rather than teaching excellence *per se* and its lack of support for those who are outstanding teachers. However, it is also noticeable that little critique of TEF has come from those on TEF panels, unlike the parallel case of the UK Research Excellence Framework where panel members have been active in critique over several decades. The Covid 19 pandemic came as a shock to the whole world. The consequences of extended lockdown of HE institutions and the rapid new emphasis on developing online learning have brought both new skills for academics but also problematic working conditions. There has also been a lack of

analysis about the content and not just the execution of online teaching and learning, its underpinning values and purposes, the strength and relevance of HE institutional relationships in connection with the development and use of online teaching and what will constitute the overall societal contribution of this shift to online teaching.

In concluding, it is evident that there are many ways in which major events and national policies of various kinds can affect teaching in HE and some of the policy consequences are inevitably negative. All the more reason then, to use research on higher education as a mechanism to encourage those academics who identify as policy actors to rethink what 21<sup>st</sup> century higher education should look like.

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## **WIDENING PARTICIPATION IN A CHANGING LANDSCAPE: HOW OPEN AND DISTANCE EDUCATION RESEARCH AND POLICIES ARE TRANSFORMING PORTUGUESE HIGHER EDUCATION PRACTICES**

**ABSTRACT:** Evidence-based European and national policies are having a very large impact in the development of the Portuguese higher education system, helping shape institutional strategies and teaching and learning practices. This has been demonstrated in the major transformational experiences undertaken by higher education institutions (HEI) in recent years.

This phenomenon results mostly from the combined impact that changes in legislation, funding and quality evaluation have in institutional leadership decision-making and the academic communities' perceptions. This push and pull effect is critical for accelerating educational change. On the one hand, policies are informed by emerging research trends and innovation developments. On the other hand, they redirect research efforts and commission innovation outputs, leading to the transformation of educational practices. This transfer of knowledge process is however challenging and is not always successful.

An important factor which has influenced evidence-based institutional policies and practices in Portugal is international comparability. The feedback provided by international independent review bodies, most notably the OECD has consistently influenced Government policy and indirectly driven to institutional change, as well.

In this chapter, an example of this complex process is analysed. We focus on how the European and national policies, based on research evidence, but also on international comparability of results, have contributed to accelerate the development of open and distance education in Portugal. In addition, we also look at how this effort has been put in test and affected both positively and negatively by the emergency response to the challenges of the Covid-19 crisis.

We conclude with a prospective analysis on teaching and learning futures and how the expansion of open education and its convergence with adaptive learning and artificial intelligence will continue driving the digital transformation of Portuguese higher education practices.

**Keywords:** institutional policies, open education, distance education, online learning, digital education, institutional change, digital transformation

## 1. Introduction

Evidence-based European and national policies are having a very large impact in the development of the Portuguese higher education system, helping shape and change institutional strategies and teaching and learning practices. This has been fully demonstrated in the major transformational experiences undertaken by higher education institutions (HEI) in recent years.

The implementation of the European Higher Education Area, also known as the Bologna process, which disseminated a student-centred approach and imposed a standard credit transfer system (ECTS), led institutions to the widest revision of curricula and teaching practices in decades. More recently, the internationalization of Portuguese HEIs, fostered by student exchange and special recruitment schemes, was again driven by European and national policies. The same has been occurring with the introduction of open science and open education. Currently, the European and national digital agenda is once more pushing forward HEIs to engage in a process of deep transformation.

This phenomenon results mostly from the combined impact that changes in legislation, funding and quality evaluation criteria set by external accreditation bodies have in institutional strategic decision-making. Notwithstanding, these policies also inspire and support the development of grassroots movements in the academic communities which uptake innovative practices.

This push and pull effect is critical for accelerating educational change. On the one hand, policies are informed by emerging research trends and innovation developments. On the other hand, they redirect research efforts and commission innovation outputs, leading to the transformation of educational practices. However, this transfer of knowledge process is challenging and is not always successful.

An important factor which has influenced evidence-based institutional policies and practices in Portugal is international comparability. The feedback provided by international independent review bodies, most

notably the OECD, have consistently influenced Government policy and indirectly driven to institutional change, as well.

In this chapter, an example of this complex process is analysed. We focus on how the European and national policies, based on research evidence, but also on international comparability of results, have contributed to accelerate the development of open education and are driving the digital transformation of HEIs in Portugal. In addition, we will also look at how this effort has been put in test and affected both positively and negatively by the emergency response to the challenges of the Covid-19 crisis.

## **2. Improving retention and attainment: a national challenge**

### **2.1. The Portuguese Higher Education Landscape**

As a result of the rapid expansion of the higher education system in the 1980's and 1990's following the democratic revolution of 1974, the Portuguese higher education institutional landscape is much diversified and rather complex. Large institutions co-exist with much smaller ones and their strategic and operational focus range from the local and regional to the international.

Portuguese higher education (HE) is organized in a binary system that integrates university education and polytechnic education. The first is provided by universities and is research oriented. As for the second, it is assured by polytechnic institutes, which are similar to the UK post-92 universities and can provide both undergraduate and postgraduate programmes of study. They focus on professional oriented vocational and advanced technical training. Both kinds of institutions can be public or private (MCTES, 2007).

The Portuguese Catholic University enjoys a special status as it operates as a non state public institution. HEIs belonging to private entities and cooperatives can operate if recognized by the Ministry of Science and Higher Education (MCTES). There is a public open university (the Univer-

cidade Aberta - UAb) which dedicates to distance education and delivers all of its provision online using a specific e-learning pedagogical model.

HEIs enjoy scientific, pedagogical, cultural and disciplinary autonomy. As such, they have the ability to define, program, design and execute research and other scientific activities. Similarly, they may draw up the curricula, define curricular unit objects, define teaching methods, affect resources, and choose knowledge assessment processes.

The evaluation and accreditation of HEIs, public and private, and their programmes are assured by a national Quality Assurance agency (Agência de Avaliação e Acreditação do Ensino Superior – A3ES). The A3ES is an independent body *vis-à-vis* Government and institutions. In addition to the accreditation of programmes it also sets a maximum enrolment capacity for their operation.

Funding of the HE system is based on a three-way relationship between State and the HEIs, the Students and HEIs, and the State and the Students. Public institutions receive Government funding only for 1st cycle programmes, based on a per capita calculation. This favours the HEIs with more capacity to attract students. Students also pay a small tuition fee. The funding of the other two cycles depends on student tuition fees alone.

## **2.2. Systemic challenges and opportunities for quality enhancement In Portuguese higher education**

Throughout the years participation in HE has been consistently growing in Portugal. A significant indicator is the shift in the attainment levels of its young adult population (25 to 34 years old). The age cohort completing HE has risen from 13% in 2000 to 35% in 2016 (OECD, 2017). In spite of such impressive development, retention and attainment remain a major problem which limits socio-economic development. The attainment rates are still below the OECD average, as well as EU and national targets for 2020 and 2030. As acknowledged by the Portuguese Government it is a critical goal for the higher education system to widen access further,

while also ensuring that an increasing number of students complete their studies and obtain their degrees.

In 2016 a study group set by the MCTES examined a range of constraints to raising higher education access and attainment, among them being the limited pathway from secondary professional education to HE. Since then, the Government has included the revision of the higher education admission system as a policy goal in order to broaden the student recruitment base.

Portugal also underperforms in what concerns completion rates to the average in OECD member countries. According to the data available, this is not consistent across the system as significant differences can be detected between different institutions and study programmes. Public institutions, universities, more competitive programmes, and 1st cycle degrees tend to have lower dropout rates than others.

Another major area for improvement in what regards educational excellence is student support. Study programmes in Portugal typically require extensive instructional contact and students are provided with limited access to academic support and guidance services when compared with other European systems. Moreover, HEIs serving students at high risk of attrition have not in place effective tools to systematically track, contact, and support students who experience academic difficulties. Adequate support to students making the transition to HE is also needed as often recommended by independent international review panels.

This suggests how important it is for Portuguese HEIs to develop and implement technology-enhanced systems to monitor students' performance and to signal difficulties thus effectively supporting early intervention and promoting student success. Systematic information on students' academic performance (including particular deficiencies and gaps) could also lead to positive changes in upper secondary institutions' practices. Based on solid data, they could evaluate, review and recalibrate schools' curriculum and teaching practices in accordance. It is known how the transition from secondary education to university education is problematic and requires intensive support (Marland, 2003; Kottmann et al., 2019).

Similarly, in order to meet these systemic challenges, it would be helpful to promote open access to a limited part of HEIs provision in form of open educational resources (OER) and to develop massive open online courses (MOOCs) as the OECD reviewers have suggested. These practices could make a significant difference in student success (OECD, 2019). This recommendation reinforced the idea that Portuguese HEIs should clearly embark on a consistent and strategically driven bridging process between non formal, informal and formal learning.

Portugal's HEIs hardest challenge though is to meet such an ambitious reform agenda with its current academic staff. Although well prepared scientifically and active in international research, the faculty at Portuguese HEIs is of an advanced age, with 45,3% over 50 years old (PORDATA, 2020) and most lack specific pedagogical training. Academic staff training also seldom reflects the diversity of requirements across student groups and institutions and increasing flexibility of the educational offer. The typical example is the training on online learning received which has mostly been delivered in-person in physical environments.

Teaching performance, transparently and objectively evaluated, is not a key element for the evaluation and promotion of academics either. The uptake of effective pedagogical approaches for skills development and greater co-operation with employers and outside actors has been strongly recommended by the international panels (OECD, 2019).

### **3. National policies for open and distance education**

#### **3.1. Regulating and fostering distance higher education**

Distance education programmes are offered by several HEIs, most particularly the UAb. In 2018/19 the UAb provided 11 distance learning undergraduate programmes and 29 distance learning master and doctoral programmes in various fields of knowledge. The institution enrolled 4,983 students in 1st cycle undergraduate programmes, about 2.3% of the nation's 219,615 undergraduate students (PORDATA, 2020),

and an additional 1,019 students in the other postgraduate programmes. A total of students enrolled, corresponding to 1,6% of the country's total, to which should be added 2,478 more from lifelong learning non formal courses.

Portugal's public polytechnic institutions offer another eight distance education programmes (DGES, 2018). When compared with other European countries, there is a small number of HE mature students who combine work and study. On average, 18% of new entrants in higher education were older than 25 years old across OECD countries, compared to only 9% in Portugal (OECD, 2017).

With the purpose of stimulating the expansion of online learning provision in public universities, the Government issued in 2019 the Legal Framework for Higher Distance Education (Decree-Law 133/2019, a.k.a. RJESaD). Only a few countries have issued specific legislation on distance higher education and eLearning so far. The most notable cases being Italy and Brazil.

The discussion which led to the approval of this legislation which is original in Europe, was initiated a decade earlier, following a request from the UAb. Being the dominant force in distance education provision, the institution feared that the entry of new players in an unregulated sector could lower the quality standards. At that time, a provision in the general legislation regulating HEIs has been made stating that a dedicated distance education act should follow up.

This understanding was later shared by the national quality assurance body. The A3ES felt such regulation was paramount to provide them with a clear framework for evaluating new degrees delivered online. Following the publication of the revised Standards and Guidelines for Quality Assurance in the European Higher Education Area - ESG (ENQA, 2015) specific quality standards and criteria have been developed in order to allow for European quality assurance agencies to appropriate evaluate eLearning delivered programmes (Huertas et al, 2018).

The RJESAD presents a holistic view on how the sector should be regulated, combining a number of requirements for providers, programmes and courses and also a set of criteria to organize quality assurance. In

addition, the RJESAD establishes a new specific role for the UAb within the HEI national public system. According to the legislation, the UAb should become the national research and resource centre for distance and eLearning. All of the other HEIs wanting to provide distance and eLearning are expected to partner with the UAb for developing their programmes and courses. The UAb is bound to have all of its provision delivered in partnership in order to receive public funding.

The RJESAD has major implications as it promotes an innovative operational model based on institutional collaboration and resource sharing. The creation of consortia between HEIs and other public institutions and organizations from civil society is favoured. The provision of joint degrees is suggested to become standard practice. The principles of unbundling HE services are clearly applied. In this scenario, institutions are expected to specialize their contributions, either by providing scientific knowledge and expertise, or by assuring the teaching and learning design and management of the courses.

Even though this could be observed as a courageous and visionary choice, its implementation calls for a major transformation of the Portuguese HEIs operational practices. As such, legislation as the RJESAD must be used as a policy tool. However, there are some risks associated to redesigning the role of UAb in the national spectrum. By having a special section of the law dedicated to UAb, and therefore, leaving the other HE institutions out, this might lead to unnecessary tensions between the institutions.

### **3.2. The role of open education**

The RJESAD imposes a new strategic ambition for the distance higher education system by setting a target of 50.000 students enrolled by 2030. This would correspond to a level of penetration similar to the leading European countries in this sector, like Spain and the UK. Surprisingly, the legislator did not extend the new regulatory framework to open education and massive open online courses (MOOC).

Nevertheless, the current Government's action programme (2019-23) explicitly commits to promoting MOOC certifications and promises to stimulate the enrolment in global MOOC platforms. It goes as far as including a specific reference to the EdX and Coursera MOOC platforms. This policy is supported by a specific national initiative on digital competence (the INCoDe.2030) which funds some MOOC initiatives.

Having originally started as a proof of concept of the connectivism educational theory, MOOCs obtained worldwide recognition as a content distribution tool used by the leading US universities. In Europe MOOCs also became a political driver for higher education policy and institutional strategy (Jansen et al, 2015). In fact, MOOCs have activated the discussion on open and online education across the continent in universities and in national ministries. This paved the way for the development of a specific program of the European Commission aiming to enhance the adoption of open education in Europe (European Commission, 2013). This policy legacy was continued leading to the new Digital Education Action Plan (European Commission, 2018).

#### **4. The impact of Covid-19: adjusting to a strange new normal**

Distance and online learning confirmed their critical importance in 2020. As soon as COVID-19 was declared a global pandemic by the World Health Organization, most schools and campuses were shut down because of strict social distancing measures. UNESCO estimates that 1,6 billion students from 138 countries worldwide were affected by this emergency at the moment of crisis. In this unprecedented context, the continuation of formal education activities became a top priority in the global political agenda. The solution found for this enormous challenge was the massive implementation of remote teaching and learning.

Unfortunately, due to the global scale and speed of this forced and unexpected transition, educational institutions weren't given much time to consider existing research and best practice. Moreover, the inequalities in access to technology which still divide our societies, coupled with low

levels of digital competence, presented a huge obstacle for the dissemination of internet-based education. These limitations conditioned the quality of teaching and learning practices carried out not only in Portugal but also across the world (Hodges et al., 2020). During this crisis, academics and teachers in schools struggled to manage interaction with students and showed unfamiliarity with digital assessment.

Most academics were untrained for online learning and didn't have the necessary digital literacy, or the competence and skills needed to deliver high quality online-based teaching (Gewerc et al., 2020). As a result, they resorted to replicate face-to-face teaching practices using web conferencing and synchronous communication platforms, leading to digital fatigue and work overload. In Portugal it was registered a 3,956% increase in the number of Zoom meetings during the 1st quarter of 2020 in regard to the previous period<sup>1</sup>. The educational advantages of asynchronous online learning seemed to have been lost in these emergency remote teaching practices, as Bates (2020) rightly notes. As a result, the majority of stakeholders have expressed since then strong criticism towards distance education. The basic argument being made is that it doesn't assure universal access to quality education. This relates to the low levels of digital readiness of the educational system and its actors, which unfortunately led to poor results.

Although the UAb proved to be much better prepared for this emergency scenario, it still had to struggle with unforeseen challenges. The virtual classrooms remained open and activities kept running as usual. However, similarly to all other universities, the entire faculty, support staff and student body were now teaching, working and learning from home; many in poor conditions, most needing extra care and attention. Good and fluid communication became paramount as well as an increased attention to mental health and well-being of faculty and students. Although academics used appropriate designed pedagogical approaches, students

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<sup>1</sup> Source: FCCN. <https://www.fccn.pt/estatisticas>.

See also <https://www.fccn.pt/a-utilizacao-do-colibri-foi-crucial-para-substituir-as-aulas-presenciais>.

experienced digital fatigue and forms of depression due to the social context and family environment. Moreover, the UAb had to move the student assessment system entirely online almost overnight which proved to be a challenging task.

If education systems weren't prepared for this emergency, neither was the EdTech expert community. In spite of the solid body of research and best practices accumulated throughout the years, such an unexpected scenario had never been considered. For instance, there was no robust theoretical and practical knowledge on how to organize distance learning for non-adult populations, particularly young children (Bates, 2021). This massive experience has raised a number of new issues and problems which need to be addressed by policy and research (Hodges et al., 2020; Gewerc et al., 2020).

The Covid-19 emergency response represented a critical test to the open and distance education policies in Portugal. Despite the evident limitations of the remote education solutions applied, the pandemic has made it possible to accelerate and greatly expand the ongoing movement of digital transformation of HEIs. A good example was provided by the University of Aveiro which launched an ambitious digital transition programme involving all faculty and engaging R&D units specialized in EdTech<sup>2</sup>. Research and innovation were called to play a key role in this process.

## **5. A dive into the digital education futures: how Portuguese higher education institutions will open up**

The 'Battle for Open' (Weller, 2014) is an ongoing process across HE. In recent years open education has become a major part of the Open Science movement (Burgos, 2020). This represented the convergence of open learning and OER, open source, open access, open publication, open data, open peer review, open innovation, and open licensing with

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<sup>2</sup> See <https://www.ua.pt/pt/noticias/11/62858>.

new trends, as scientific social networking, and citizen science (Fecher et al., 2015).

The policy of open science is grounded in the principle that education and research, supported by public funding, should not only be available for all, but should also stimulate everyone's participation (European Commission, 2016). An open knowledge ecosystem is thus being built with important implications on how the HE research and innovation landscape is organized and operates (European Commission, 2018; Burgelmann et al., 2019).

Portuguese HEI's are therefore called to embrace openness in this broad perspective which implies a significant transformation of their organizational cultures, as well as educational practices and internal procedures. From institutional governance, policies and strategic planning to technological infrastructure, teaching and learning practices, faculty support and professional development (Castaño-Munoz et al., 2016). In order to be successful, research recommends that a holistic and bottom-up approach should be adopted (Inamorato dos Santos, et al., 2016).

Notwithstanding, future mainstreaming of open education and MOOCs also requires that researchers develop more sustainable learning design models. As the emergency response has shown, online pedagogical models should be grounded in solid research and distance education theory and fully explore the affordances of asynchronous communication. Moreover, in order to facilitate a wider implementation, these models need to go beyond comprehension or networking to develop critical thinking, analysis and evaluation, thus leading to effective 'transformational learning'.

Similarly, open educational practices (OEP) should be also designed in such a way as to promote larger flexibility and personalization of learning, differentiating content, activities and assessment according to individual needs and expectations. The combined use of learning analytics, adaptive technology and artificial intelligence will enable to accommodate an increasingly larger heterogeneity of students/learners and also to decrease dropout dramatically. Nevertheless, the consolidation of OEPs requires an increase participation of students/learners in co-designing, managing, and assessing their own learning experiences.

OEPs, and MOOCs in particular, will expectedly provide a more authentic learning experience, much more connected with real contexts, as a true part of students' digital life experience. This will be surely empowered by the use of extended reality technologies combined with 3D printing. However, OEPs will also embed a more gamified and challenging learning experience. New blended forms of learning assessment and recognition will be consolidated. Open certification (ex: digital open badges) will be combined with formal credits both for the university awards and for admission purposes. Employer recognition of ePortfolio based certificates will also be consolidated.

The ongoing digital transformation of HEIs will enable them to become hubs in the knowledge network and to be part of the emerging landscape of the new smart cities. It is critical that this redesign leads to a larger integration of non-formal (ex: MOOC), informal and formal learning. There is also a need to redesign teacher training models to increase focus on innovation and disruptive change and on enabling teachers to exercise practice in unfamiliar and innovative settings. The use of immersive online-based training practices should be widespread.

In this emerging context in which OEPs will be a disseminated practice, what will be the role of the open universities and in particular of the UAb in Portugal? Open universities through scale and flexibility “[...] can in terms of social policy provide a pressure valve to release frustration about educational opportunity; can deliver large scale opportunities for professional development that support improvement in quality of service and economic growth; and can support the development of an educated citizenry and so nourish self-fulfilment and democracy” (Tait, 2013, pp. 5-6). Their core mission is to educate for individual transformation and social change.

As such and following the policy goal set in RJESAD, the UAb will most probably evolve to become a fully open network-based collaborative environment, unbundling their processes and outsourcing services, sharing resources and developing a true knowledge digital ecosystem. By unbundling teaching and learning processes and outsourcing services (Teixeira et al., 2019), as well as ‘rebundling’ them into new forms

(Czerniewicz, 2018), according to different contexts, the UAb will gain flexibility, critical dimension, and resource capacity. This will equip these institutions to respond promptly to a rapidly changing environment, thus carrying on their mission of providing quality learning opportunities for all. But, by doing it in such a way, it must go against an important part of the open universities' DNA and tradition, which is to continuously grow bigger in size (Christensen & Eyring, 2011). The new approach should be to cooperate within networks. The transition to such a disruptive innovation-based model requires vision, time, detailed planning, and consistent development (Teixeira et al., 2019).

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## EVALUATION OF TEACHING IN SPANISH UNIVERSITIES

**ABSTRACT:** Evaluation is a tool for professional and institutional improvement, and development. The evaluation can be based on internal initiatives, and on the needs of each teacher or institution. Despite this, there are different mechanisms of external initiatives imposed by the quality agencies or government. These mechanisms not only evaluate performance after the professional exercise, a ‘posteriori’, but also guide professional careers in advance in some way.

In Spain there is an ‘ex-ante’ evaluation mechanism for the accreditation of university teaching staff before entering the profession. There are also continuous evaluation processes of professional practice clearly biased towards the promotion of research.

Although teaching and management have been included in the evaluation processes, the weight that research activity has in evaluations and promotions of academic careers is the most significant, which leads to a profile of academics very specifically oriented towards research.

Spanish law indicates that the university’s mission is not only to create knowledge but also to preserve existing knowledge and disseminate it, and these two roles seem less considered in the evaluation processes. Is the evaluation of university teachers really aligned with the purposes of the university? This question is described and explored in the present chapter.

**Keywords:** Evaluation, Quality Assurance, Professional Practice, Continuous Professional Development, Recognition and Progression

### 1. Introduction: the evaluation of teaching within the framework of program evaluation

In 1978, the Spanish Constitution consecrated the autonomy of Universities and guaranteed with it, academic freedom, teaching and research, as well as the autonomy of management and the administration of its

own resources. In 2001, the Organic Law 6/2001 on Universities (LOU) reiterated and broadened the issue of autonomy, linking it with accountability to society that promotes and financially sustains it (Article 2 of the Organic Law of Universities). This law was modified six years later by the Organic Law 4/2007; nonetheless, the issue of autonomy and evaluation did not undergo any modification.

The decentralisation processes that have been developed during these 40 years involve accountability. In this line, institutional autonomy has been progressively accompanied by processes of assuring quality and accreditation that have affected educational institutions and programs.

Regarding the evaluation of programs, this is undertaken by the National Agency for Quality Evaluation and Accreditation (ANECA). Since a catalogue of degrees no longer exists, the various universities offer their own qualifications. These go through an '*ex-ante*' evaluation of the design of the Degree or Master that is offered by the national agency ANECA (verification process) and '*ex-post*' evaluations periodically. All official university degrees must go through this accreditation process within six years starting from their initial verification (or last accreditation) in the case of Degrees and Doctorates and within four years in the case of Master's degrees. First, quantitative data (based on indicators) and if appropriate, qualitative data (providing evidence and/or traceability of the work) are collected to draw up a report of the Degree by the institution itself. This report is analysed and externally validated by a committee of experts in specific subject fields and in evaluation studies, who visit the educational centre. During the visit, this group of experts can collect more data should they consider it necessary, and contrast some of the information contained in the report. To do this, a sample of students, graduates, employers, and academic leaders are interviewed. As a result of this process, an external evaluation report is written and subsequently a final report that indicates not only the official accreditation that this degree displays publicly (there are some official seals) but also a set of actions of improvement to be carried out, with their respective deadlines, resources, and with the

tracking indicators for its monitoring. The result of the accreditation can be favourable (accredited with excellence or only accredited) or unfavourable (accredited with conditions or not accredited). In the case of the one that is accredited with conditions, those responsible for the degrees and the evaluation agency agree on an improvement plan that must be implemented within a maximum period of two years. Once this period is over, the degree committee must submit a follow-up report that responds to the actions implemented.

These evaluations are also a good opportunity to assess the teaching of the whole degree. Therefore, the quality assurance systems include indicators on teaching quality since it is necessary to establish control mechanisms that allow deviations to be redirected. They could, without a doubt, not only be used for administrative purposes (Rueda, et al., 2010), to overcome the process of accreditation of university qualifications, but also with a developmental purpose. This requires a firm and determined evaluation culture within institutions.

On the other hand, the quantitative indicators used can be misleading and they should also be created bearing in mind that teaching quality is never exclusively from the responsibility of the teacher itself, but, in part, it also depends on institutional factors, such as the degree of teacher coordination, available resources, previous and intrinsic motivation of the students. Considering all of this, data must be interpreted carefully, processes of attribution of collective significance established and support should be promoted to allow for sustained improvement.

## **2. Evaluation of teaching staff**

Regarding the evaluation of teaching staff, there is a difference between the evaluation for the obtaining of the official accreditation of some of the teaching staff figures in the evaluation system, that is, evaluation prior to hiring, to the evaluation of the teaching staff in practice throughout their career.

## **2.1. Evaluation for access to the teaching profession**

Evaluation of the teaching profession has to be focused on the research quality, the teaching quality, knowledge transfer and management. This is indeed what happens in many other countries, like the UK or Australia. In Spain all these dimensions are considered, but in fact the access to the teaching profession is mainly based on research merits. There is hardly any place for the ‘ex-ante’ accreditation of full professors, associate professors, lecturers or assistant lecturers to record teaching merits. It is true that without a minimum number of credits imparted, accreditation is not achieved. That is, the amount of teaching undertaken is a requirement. In contrast to this, an abundance of details is requested as regards research merits, not only with respect to the “quantity” but also to the “quality” measured through indexation systems of the research outputs. Basically, publications indexed in the Web of Science (WOS), the Journal Citation Reports, are required even for lower-level teaching positions. Although it is true that there has been a tendency to progressively value teaching through criteria such as: teaching experience; teaching publications; teaching innovation projects and teaching improvement; communications and presentations presented at conferences and seminars on university teaching; positive evaluations of university teaching activity; it is still much less valued than the research dimension. This is why novice teachers and researchers tend to dedicate more time to research.

## **2.2. Evaluation of teaching staff**

The evaluation of teaching staff for career progression includes research and teaching activity but with a similar imbalance. This is an evaluation for promotion and/or with remuneration effects. Teaching is considered to be of less importance than the evaluation of research, since it has less impact on professional development, and this can guide the efforts of teachers towards what is most relevant to the institution or system, in this case, research.

### **2.2.1. Evaluation of research; what really matters**

Evaluation of research is requested every six years; hence we talk about a six-year research period. Each field of knowledge establishes the evaluation criteria that require a positive evaluation. These six years are deemed really valuable for the teaching staff for various reasons as presented below.

Firstly, Royal Decree-Law 14/2012 introduces the concept of a “live/active” six-year term, whereby any teacher that does not have an active research period may see their teaching load increased to a maximum of 32 ECTS credits, when the usual maximum load is 24 ECTS credits for full and associate professors. This Royal Decree has been partially repealed by Law 4/2019 of March 7th, but only the measures of the rationalisation of public spending related to non-university education have been eliminated and, instead, all that related to higher education has remained. Therefore, teachers can still be required to teach up to 32 ECTS. That is to say, the number of classes that have to be taught can increase by a third if they do not obtain a positive evaluation on their research activity. It seems that those who do not undertake research are penalised through increased teaching hours. And for those who are more research active, it means a reduction in their teaching load. These periods of research evaluation are also essential for the supervision of doctoral theses or for being a member of a research panel. It means that if a professor does not have a minimum number of six-year research periods, s/he cannot be a supervisor of PhD students, cannot be a member of PhD boards or cannot access some research calls.

Secondly, the evaluation of university teachers is carried out by bodies that are different from the ones that evaluate the quality of teaching. Article 32 of the Organic Law of Universities clearly indicates that ANECA will take on the functions of evaluation of the research activity. It involves a centralised evaluation undertaken by ad hoc committees for each field of knowledge. There is a national body, the National Commission for the Evaluation of Research Activity (CNEAI) that assumes these competencies. However, as will be explained later, the evaluation of teaching is

a matter for each institution. The results of the evaluation processes of research activity show some success rates<sup>1</sup> that are very different from the results of teacher evaluation, whose global data is not compiled but which can be consulted in each institution<sup>2</sup>.

Thirdly, the remuneration supplement that derives from a positive evaluation is much lower in the case of teaching than in the case of research. In addition to the national economic supplement, an autonomous additional remuneration can be requested. This can be done by submitting the application directly to the regional agency, independently, or, for teachers who can apply, for the national call, and that have obtained a positive evaluation, requesting the “validation” of the positive national evaluation.

Fourthly, the prestige derived from having periods of positive evaluation in teaching or research is radically different. Culturally, teachers value research, although most of them must combine research and teaching activity. In fact, it is possible that the current process of research evaluation implies a certain stigmatisation on the people without six-year terms of research activity.

This institutional culture of valuing research more than teaching is having important repercussions on the identity of teachers since the young teaching staff see themselves as researchers; against more experienced teaching staff that still position themselves as teachers (Caballero & Bolívar, 2015). It also has repercussions on the professional culture, since it seems that teachers are sceptical about these evaluations (Trullen, 2007) but are strongly affected by external evaluations and, in this sense, tend to have a docile approach in obtaining positive evaluations.

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<sup>1</sup> <http://www.aneca.es/Documentos-y-publicaciones/Informes-de-resultados>

<sup>2</sup> <http://www.aneca.es/Programas-de-evaluacion/Evaluacion-institucional/DOCENTIA/Resultados>

## **2.2.2. Evaluation of teaching and its residual value**

### **2.2.2.1. *Description of the current procedure***

The evaluation of teaching can be done every five years (the so-called five-year teaching period). The only minimum requirement for applying is to exceed a minimum number of credits taught in a five-year period. If a professor devotes approximately half of his/her time in the institution (measured in ECTs and/or hours of service) to teaching, s/he is in a position to be evaluated. No other requirement is compulsory:

Much remains to be done in Spain, “to evaluate teaching quality”. ANECA essentially uses years of experience, although the positive evaluation of teaching periods, together with that of teaching quality are also mentioned, not forgetting innovation projects, training courses (...) In this sense, it is interesting to observe the relationship between self-efficacy, teaching approaches of the faculty and teaching-research articulation (Díaz, 2016, p.67).

#### *Who evaluates?*

As stated earlier, the evaluation of research is attributed to ANECA in the Organic Law on Universities. However, nothing is mentioned regarding the law of teaching evaluation. ANECA has a Support Program for the Evaluation of the Teaching Activity of University Teachers (DOCENTIA) in order to support universities in the design of their own mechanisms to manage the quality of the teaching activity of university teachers and to promote their development and recognition. Each university designs its own evaluation manual of teaching activity in accordance with DOCENTIA. The design is submitted for external evaluation to see if it meets the specifications and criteria of the DOCENTIA model; the model is implemented and after a follow-up process, it is finally certified. Thus, each university applies its own certified teaching evaluation manual, so that the evaluation of teaching is done locally, within each university. Some universities also need to have the manual accredited by the regional

agency (e.g. in Catalonia, AQU). The unit responsible for each university submits its request to the agency, which corroborates the decision.

*What are the dimensions that are assessed?*

Evaluation of teaching is based on various kinds of evidence. First of all, student satisfaction surveys should be collected and commented on. It deals with assessing the results obtained in the various items, such as interaction with students; quality of teaching materials; ability to communicate clearly and in a structured fashion, etc; and to reflect upon possible future strategies that could lead to improvements. This is undoubtedly positive, but we must pay heed to two aspects. In the first place, currently in almost all of the institutions, these opinion surveys are administered online, which results in a poor response and the answers are usually highly polarised. Therefore, the validity of the data collected is debatable. Secondly, the items that are assessed are regulated by a teaching quality model, to a desirable teaching profile. Behind all of this, there is a decision that goes beyond the teaching dimension:

It is a difficult process because there is no agreement regarding what a "good teacher" is or about the purposes of teaching, which is why teacher evaluation is still a problem with important limitations, not only theoretical (diversity of purposes and lack of ideal teacher models) but also of a practical nature, as it is difficult to choose the appropriate evaluation strategy when it is not easy to establish its validity (Tejedor, 2018, p.4).

Some relevant items are relative to the mastery of the subject, the materials provided, the ability to interact with students, the level of participation that is fostered in the classroom, etc. These items are obviously in line with some criteria and dimensions behind what teaching quality is. Hence, sometimes teachers who distance themselves from what is established and try other ways of interacting with students or other assessment techniques, are "penalised" in teacher evaluations and this could lead to discourage work in the field of teaching that diverges from these pre-set of items.

Thirdly, attendance at teacher professional development events should be recorded. Participation in seminars, conferences or training courses for teacher development are elements to be presented in order to request a positive evaluation. This has perhaps led not to increase interest in teacher professional development, but rather to a greater number of students enrolled in the activities that have been initially designed for teaching staff.

Fourthly, participation in teaching innovation projects is valued. Most institutions have units that recognise (and sometimes even fund) projects linked to teaching innovation, such as the introduction of information and communication technologies; application of active learning methodologies; diverse assessment activities, etc.). These projects usually consist of applying a new teaching proposal to some subjects and assessing its effects. At times, having several projects over the years can lead to consolidating lines of action and even having institutionally recognised teaching innovation groups.

Finally, a self-report is usually requested to comment on the teacher's interpretation of certain quantitative data. The pass rates on the subject or the degree of students' satisfaction with the tutorials can be assessed and taken as the basis for contemplating future teaching strategies.

#### ***2.2.2.2. Some hopeful indicators***

With the description of the current evaluation system, the picture is not very encouraging. However, there are reasons to be optimistic. Three types of initiatives are highlighted as examples.

##### a) Teacher's professional development

In the latest evaluation for teacher's promotion, teacher's professional development/training is being considered, especially for new university teachers. This is why almost all universities have set up training programs for university teachers. These programs sometimes take the form of their Postgraduate degrees or Master's degrees. The continuous professional

development of teachers is also being valued. In order to facilitate mobility, transparency and continuity between initial and ongoing professional development, it would be desirable to have a common framework for teaching competencies. This framework should be the collective reference for the design of the professional development opportunities. This has been achieved in some areas from joint projects of universities for the collaborative design of this frame of reference.

b) The consolidation of teaching innovation teams

In the evaluation of teaching, not only participation in projects is valued but also being part of teaching innovation projects. This means that there are teachers that are committed to improve in a systematic way and that will continue to develop projects, consolidating lines of teaching innovation in their educational settings. The groups, which receive different names in each institution can be transversal, but specific groups from a field of knowledge whose teaching approach is personal or that sustain innovations in curricular or in a specific subject are also admitted.

c) The existence of teaching awards and prizes

Some universities have promoted calls for prizes for teaching quality. Interestingly enough, in the case of the Universitat de Barcelona, it was the Social Council that had the initiative. On the other hand, universities in Catalonia can propose members to apply for the ‘Vicens Vives Awards<sup>3</sup>’, both individually and/or in groups. University teaching conferences organised by all public universities, which also have prizes for the best contributions, are also held biennially. These are then shared publicly, and sometimes promotional videos are made. These awards/prizes are considered in the evaluation of teaching and generates an institutional culture conducive to innovation in university teaching and learning.

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<sup>3</sup> [http://universitatsirecerca.gencat.cat/ca/01\\_secretaria\\_duniversitats\\_i\\_recerca/premis\\_i\\_reconeixements/distincions\\_jaume\\_vicens\\_vives/](http://universitatsirecerca.gencat.cat/ca/01_secretaria_duniversitats_i_recerca/premis_i_reconeixements/distincions_jaume_vicens_vives/)

### 3. Future Challenges

Based on the description made, it seems that there is some room for improvement, changing the *harmful inertias* that can lead to teacher evaluation being a simple process.

The evaluation must be viable, objective and fair in any case, but especially when it can contribute to the selection of teachers who wish to access the profession, and to the reward/promotion in the case of teachers already in practice. However, at the same time, the true potential of the evaluation lies in its formative and developmental nature; in fact, the main challenge for the future is precisely that.

In 1967, Scriven coined the expression of formative evaluation. Therefore, it is a very consolidated expression. Since then, progress has been made in formative evaluation referring to students' learning, however, teacher training has been less assessed. Countries that have teacher evaluation systems usually incorporate them for accreditation, promotion, and/or accountability purposes. There are some initiatives, especially linked to new teacher training programs, where teachers build their own portfolios that reflect their learning process and end with a proposal for improvement (Carrasco & De Corral, 2018). The effects of this practice have been widely documented (De Rijdt et al., 2006). There are also other experiences of self-reports (Centra, 1993) by teachers, including the participation of peers in the evaluation processes, with observation, dialogue and feedback processes. This last practice has been more developed in non-university education (Teddlie, et al., 2006; McMahon, et al., 2007; Shortland, 2010) and has produced very interesting results, as long as one has predetermined criteria at hand (Burgess, et al., 2019). However, all of these proposals are often isolated experiences that have a very limited dimension, and which have not been incorporated into national or regional systems of teacher evaluation. Perhaps this is a pending matter. Thus, it is necessary to question whether these experiences of great learning potential can be included in the framework of formal evaluation processes which purpose is basically accrediting. Whether or not the formative and summative character may be present in the same

evaluation process is something that has already been discussed by some authors (Black & Wiliam, 1988; De Camilloni et al., 1998), because when there is a summative aim, it is perceived as a priority by the subjects assessed and devalues and even invalidates the its formative dimension. This would be an argument to advocate for separating opportunities of formative and summative evaluation.

In any case, the evaluation is for making decisions (Stufflebeam & Shinkfield, 1987). We can ask from an educational point of view, what about those teachers who have certain difficulties in the planning and development of their teaching? Are there opportunities for improvement? Do they become really aware of their strengths –to empower- and their weak points –to review? Do they undertake any kind of future proposal such as improvement plans, objectives for the following course, etc? And regarding the summative objective, one must also enquiry the following: What happens to those who do not achieve a positive evaluation? Are they simply not rewarded with salary complements and/or other incentives? What are the consequences for students by having teachers with little dedication and/or preparation for teaching and obtaining unsatisfactory teaching evaluations? How can the system support them? These and other questions continue to be debated in order to outline effective evaluation systems for university teachers aimed at personal and institutional improvement.

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**IQAS AND CONTINUOUS IMPROVEMENT  
IN THE QUALITY OF THE TEACHING AND  
LEARNING PROCESS: AN EXPERIENCE  
AT THE UNIVERSITY OF COIMBRA**

**ABSTRACT:** The main objective of this work is to discuss the relevance of an Internal Quality Assurance System (IQAS) for the continuous improvement of the pedagogical quality of the Higher Education Institutions (HEI), their courses and teaching and learning processes. It presents, from an institutional point of view, the key aspects that promote the effectiveness of an IQAS, assuming that it will be more successful if it results from a bottom-up strategy. This strategy is more engaging and requires permanent levels of dialogue and sharing between the stakeholders.

This work presents the long-term experience of the University of Coimbra in using surveys to evaluate the quality of teaching and learning. It illustrates how the results of these surveys are used to implement improvement actions in response to issues and problems identified. It also describes how, in the Faculty of Economics at the University of Coimbra, the information from the surveys is shared by the stakeholders and integrated into the identification of activities and actions with the objective of

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<sup>2</sup> Centre for Business and Economics Research (CEBER)

<sup>3</sup> Centre of 20<sup>th</sup> Century Interdisciplinary Studies (CEIS20)

continuously improving the teaching and learning process and the work conditions of students and teachers. We present examples of actions implemented to respond to students' negative comments (e.g., review of the assessment moments, learning spaces, such as the lack of space to meet and perform group work) and teachers' negative comments (e.g., administrative and bureaucratic workload, student failure rates in some curricular units).

Finally, we discuss the use of the survey results in the evaluation of teaching quality. The students' contribution to the evaluation of teaching presents important benefits to ensure the quality of teaching and learning of this particular HEI.

**Keywords:** Internal Quality Assurance System (IQAS), internal evaluation, teaching and learning process, teaching performance evaluation, accountability and enhancement

## 1. Introduction

The democratization of education and the exponential growth of the number of students and the number of undergraduate and postgraduate programmes, the relevance of higher education for the qualification of new generations and public spending in higher education have led to a growing concern about the quality of the teaching and learning process, and the effectiveness of the Internal Quality Assurance Systems (IQAS) (Machado dos Santos, 2011, p.2). Engagement with “quality assurance processes, particularly the external ones, allows European higher education systems to demonstrate quality and increase transparency, thus helping to build mutual trust and better recognition of their qualifications, programmes and other provision” (ESG, 2015, p.6; Huet et al., 2011).

In Portugal, and after several experiences of internal and external evaluation of Higher Education Institutions (HEIs) and their formative offer, the Agency for Assessment and Accreditation of Higher Education (*Agência de Avaliação e Acreditação do Ensino Superior – A3ES*) was created by the Decree-Law 369/2007 of 5 November and started its operation in 2009. The Agency is responsible for the evaluation and accreditation of all HEIs and, either new or existing, degree awarding study programs. It also has encouraged the HEIs to certify their IQAS. This external audit exercise has contributed to the development and consolidation of a culture of quality and to the enlargement of the IQAS to the entire mission

of the HEIs, in accordance with the European Standard and Guidelines (ESG, 2015) and the references of the A3ES (A3ES, 2016).

The continuous improvement process requires an ongoing exercise of planning, action, monitoring and improvement (PDCA cycle, Plan-Do-Check-Act), by setting a few, but relevant, improvement actions. These must be aligned with the institutional objectives and with the activities that stakeholders consider necessary for the effectiveness and efficiency of the student-centered learning process and to promote their employability. Based on the authors' institutional experience, we discuss the importance of an integrated IQAS, common to the whole institution, as well as the regular meta-evaluation of the information produced by the system and the visibility of the consequences of the regular self-evaluation exercises. We present some concrete examples of how the six-monthly quality evaluation of the curricular units (CUs) and teachers, and the annual evaluation of the quality of the study programmes operating conditions influence the decisions taken in relation to the improvement actions to be carried out in the following semester/year. Finally, we reflect on how the information collected by this evaluation exercise can influence the evaluation of teacher performance<sup>4</sup>.

## **2. From IQAS architecture to the quality evaluation of the teaching and learning process**

Although the idea of quality and excellence is intrinsic to academia, the acceptance of IQAS, namely by teachers and researchers, has not been easy, as evidenced in the different IQAS monitoring meetings regularly carried out by the University and its organic units (OU). The loss of autonomy, the paperwork, the time spent and taken away from research and teaching activities and the absence of consequences for no compliance are the aspects most often cited in those meetings, as well as in the

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<sup>4</sup> In Portugal, the evaluation of teacher performance is made by three-year period and involves a quantitative and possibly qualitative evaluation of activities in the following areas: research, teaching, knowledge transfer and management.

pedagogical surveys and/or study programme self-evaluation reports, as the main reasons for distrust and lack of involvement in such systems.

Nevertheless, quality assurance has been a central concern at the University of Coimbra (UC) for some years. Since 2011 it has been considered a priority for the performance of its activities. At first, the IQAS was essentially administrative in nature. It was implemented in 2002, with an ISO 9001 certification. In 2008, a model for the systematization of evaluation practices and quality assurance in the area of teaching and learning was developed. In 2011, with the first Strategic and Action Plan, the UC adopted a global vision of Quality Assurance, cutting across all the pillars of its mission (research, teaching and knowledge transfer) and resources (human, financial, infrastructural and organizational). The IQAS was certified by the A3ES in 2015.

The construction and development of an IQAS and the promotion of a quality institutional culture are not easy, particularly in a context such as that of higher education, where the individuality and autonomy of teachers and researchers are strong. For example, in the teaching staff survey, the respondents are asked to make a reflection on the strengths and weaknesses of the curricular unit (CU), as well as to define actions for improvement. And in the study programme self-evaluation report, the programme director<sup>5</sup> made a SWOT analysis and identified some actions for improvement. Until 2015 these processes were not mandatory but the answer response rate was very low (40% on average). In so, since 2016/2017 the teaching staff survey and the study programme self-evaluation report became mandatory. If teachers/directors do not comply with these activities they could be penalized on their pedagogical performance evaluation.

Despite the necessary commitment of top management to the establishment of the institutional quality policy and daily engagement in continuous improvement, the IQAS organization and development model

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<sup>5</sup> Programme director is the teacher who coordinates the functioning and self-evaluation of the programme, establishing the necessary links with the other teachers, students and the direction of OU Management Team. Other possible designations are course director or degree course co-ordinator.

cannot result from a top-down process. A bottom-up strategy, while taking longer and requiring more complex levels of dialogue and sharing of goals and points of view, is potentially more successful because it is much more engaging.

In the ENQA report about the external review of A3ES, the panel stresses exactly the importance of a bottom-up approach “to building effective internal quality assurance process based on ESG” (ENQA 2019, p. 31). At the UC, meetings in the OU are promoted to discuss the results in the scope of pedagogical quality management and improvement actions for the following year, in accordance with the Strategic and Action Plan of the University and the OU. These meetings allow the coordination between the top structures and the representatives of teachers and students. For the elaboration of its strategic and action plans, the UC has held meetings with teachers, students, non-academic staff, alumni, employers, research centres, among other stakeholders. In 2011, teachers and students (64% and 41.9% of participants respectively) rated the meetings as very satisfactory (3.56, SD = 0.49 and 3.69, SD = 0.61, respectively, on a 4-point scale where 1=“very dissatisfied” and 4=“very satisfied”). The teaching staff mentioned as positive aspects, among others: “the openness to hear the opinion of the professors in a wide way”, “the freedom to think the UC without constraints”, “the participatory method as the best way to involve people and make them feel part of the institution”. Students underlined: “the possibility to express their opinions in the construction of the strategic plan” and “the opening of the rector team to the student participation”. In 2019, the teachers who participated in the strategic plan preparation meeting (n=100) presented 145 new ideas, having then voted on the 10 most important ones. Non-academic staff (n=170) presented 250 ideas and students (n=64), members of the UC governance bodies, 72 ideas. Again, everyone stressed the importance of being involved in these processes.

The effectiveness of an IQAS depends on six fundamental aspects:

- a) Clear and shared definition of the institutional strategy for quality, with aligned strategic objectives, their goals and indicators as specified in the Strategic and Action Plan prepared for a certain

- period of time, and the quality objectives, their goals, and indicators included in the quality plan for the same period;
- b) Commitment of all stakeholders to the institutional policy for quality and their effective participation in the entire PDCA cycle, namely in making decisions about critical actions for the effective implementation of improvements;
  - c) Establishment of IQAS actors, their functions and levels of responsibility;
  - d) Identification of the IQAS processes and procedures, their mapping with national and international references and their alignment with the PDCA cycle and with risk-based thinking;
  - e) Clarification, as well as systematic and consistent implementation, of the consequences of non-compliance or points for improvement;
  - f) Unified information system<sup>6</sup> that collects, treats and discloses the findings of the surveys and of the self and meta-evaluation exercises.

An IQAS will be considered as an ally and not as a source of bureaucracy if it offers reliable and relevant information for the stakeholders and the institution as a whole (Huet et al., 2011).

Regarding the evaluation of teaching and learning quality, the cycle of this quality evaluation exercise at the UC is organized into 4 levels:

- Teaching and learning surveys, for students and teachers;
- Study programme self-evaluation reports;
- OU self-evaluation reports;
- Meta-evaluation.

The students' surveys are applied at the end of each semester (1<sup>st</sup> and 2<sup>nd</sup> cycles) or at the end of the 1<sup>st</sup> year and after defending the thesis (3<sup>rd</sup> cycle), and aim to gauge their degree of satisfaction with aspects related

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<sup>6</sup> It is very important for the HEI to have a single information system, which integrates all the functionalities with which internal stakeholders have to work (e.g. teaching and learning information; academic information; financial information; performance evaluation; IQAS).

to the study programme, namely with the quality of the CUs and teachers. The operating conditions of the study programme are assessed only once a year. At the end of the survey application period, the results are immediately available on the academic management information system.

Then starts the period for the teachers' survey. They are asked to assess the quality of the study programme (operating conditions) and the CU(s) they teach. They are invited to comment the evaluation made by students. They also identify the main strengths and weaknesses of the CU and are asked to identify the improvements that could be made in the following year. At the end of the teachers' survey application period, the results are, again, immediately available on the academic management information system.

Self-evaluation reports are prepared for each study programme at the end of the academic year. Programme directors, given the cluster of indicators made available on the academic management information system (e.g., results of the teaching and learning surveys, students' and teachers' comments, demand rate for the course, academic success, employability, etc.), perform a SWOT analysis and define improvement measures for the following year. They also evaluate the extend the measures defined the previous year have been effectively put into practice, and cancel (justifying) or redefine those that have not been implemented.

On the level of the OU, the annual report provides: i) a summary of the main activities carried out in each of the areas that constitute the pillars of mission and resources of the UC's strategic and action plan and ii) an analysis of the strengths and weaknesses identifying, for the latter, the respective improvement actions. The report ends with the monitoring of the improvement actions defined in the previous year and with a reflective conclusion on how the OU is fulfilling its action plan.

To close the PDCA cycle, an annual meeting is held in each OU, with the participation of the OU Management Team, members of the Pedagogical Council, programme directors, the OU quality promoter, the vice-rector and the division responsible for monitoring the IQAS. These meetings are a meta-evaluation exercise to discuss the results obtained within the scope of the teaching and learning quality management system and to

identify the 3-5 improvement actions that the OU will undertake in the following year.

To increase the transparency and visibility of this self-evaluation exercise, as well as the established improvement actions, the UC publishes on its site a video listing the initiatives taken by the OU(s) to improve the quality of the teaching and learning process.

Regular and participatory internal quality evaluation of the teaching and learning process has led to a large set of pedagogical experiences and significant improvements, as illustrated in the next section.

### **3. The biannual evaluation of the teaching and learning quality and the continuous improvement of the teaching and learning process**

This section describes the experience of the *Faculdade de Economia da Universidade de Coimbra* (FEUC – Coimbra University School of Economics) and shows how it uses the information produced by the IQAS of the UC to improve the teaching and learning process. The information and data presented refer to the last academic years, from 2012-2013 until 2018-2019. We start by mentioning the type of information collected and then we present some examples of improvement actions that resulted from the analysis of this information.

#### **3.1. The teaching and learning surveys of the UC**

Every semester students (1<sup>st</sup> and 2<sup>nd</sup> cycles) and teachers answer the teaching and learning survey. The items of the survey are not equal for students and teachers but there is a correspondence between both versions. The survey is composed of 15 items requiring **quantitative answers** on a Likert 5-point scale (where 1=“Strongly disagree“ and 5=“Strongly agree“). The survey evaluates three main dimensions, and each one has a summary question (sq):

- Curricular units (CU) – i.e. adequacy of workload, appreciation of the quality of learning, adjustment of theoretical/practical issues, perception about the development of analysis and critical skills.

Example of items, for students:

- “I am pleased with the level of knowledge and skills that I acquired in this CU”;
- “My global evaluation about this CU is positive”- sq.

Example of items, for teachers:

- “My evaluation about the student’s skills, abilities and commitment is positive”.
  - “My global evaluation about this CU is positive” – sq.
- Operating conditions of the study programme – i.e. adequacy of classrooms and other facilities, library, software and other resources.

Example of items, for students:

- “The library is well equipped and other tools for accessing information are equally suitable”;
- “In general, I am very pleased with the operational conditions of my programme”- sq.

Example of items, for teachers:

- “The library is well equipped to support the teaching activities”;
  - “My global evaluation about the teaching conditions of this programme is very positive”- sq.
- Teachers’ performance – i.e. clarity in the subjects taught, promotion of student self-learning, global evaluation of the teacher quality.

Example of items, for students (teachers do not answer these type of questions):

- “The teacher explains the course subjects and answers the questions, clearly and understandable”;
- “My global evaluation about the pedagogical quality of this teacher is positive” – sq.

The aggregation of these quantitative answers (at the level of the study programme/ Faculty<sup>7</sup>/ University) allows the comparison between different study programmes/Faculties.

Open comments complement the quantitative questions. These are analysed and classified according to the subject (e.g., organization of the curricular plan, content adequacy, workload, teaching skills, class timetables, bibliographical resources, the quality of classrooms and other spaces; student/teacher ratio, quality of the CU), and the type of comment (e.g., positive or negative comment or suggestion; strength, weakness). FEUC makes this analysis<sup>8</sup> according to the grids for content analysis provided by the division responsible for monitoring the IQAS. We present below some examples of these comments.

Examples of students' comments:

- “Although this CU has been lectured in the first year of this degree, there are many differences in the knowledge that students have of the French language (...). Thus, I suggest more attention to these differences so that students will get a similar standard of knowledge”. (CU of International Relations degree 2018/2019. Classification: Contents adequacy, Negative comment).
- “(...) Practical classes should be more practical, I mean, the teacher should take more action and should explain more questions and problems”. (CU of Economics degree, 2018/2019. Classification: Teaching skills, Suggestion).
- “The teacher of this CU was amazing. I developed critical skills that I had not before. I'm very pleased.” (CU of Management degree, 2018/2019, Classification: Pedagogical skills, Positive comment).
- “Please, don't schedule more than 3 exams in the mid-term assessment week”. (Economics degree, 2017/2018. Classification: Assessment, Negative comment).

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<sup>7</sup> Faculty and Organic Unit (OU) have the same meaning.

<sup>8</sup> The results of the open comments are analysed by one of the support services of the FEUC.

Examples of teachers' comments:

- “There are many students enrolled in the theoretical-practical classes”. (Management degree, 2017/2018. Classification: Student/teacher ratio, Weakness).
- “This CU has a multidisciplinary and global approach. Exposes students to perspectives and information they would not otherwise encounter, expanding their knowledge. Strong interweaving of theory and practice. Strong participatory element for students.” (Master in Sociology, 2017/2018. Classification: Quality of the CU, Strength).

### 3.2. Improvement of the teaching and learning process at FEUC – examples

The FEUC has only about 100 teachers and 3000 students. However, it has 4 Graduate degree programmes, 12 Master's degree programmes and 13 Doctoral Degree programmes, which require high-level organization. The information obtained by the teaching and learning survey is essential to improve the quality of the teaching and learning process. The FEUC appeals to students to answer them and the participation rate is always above 60%.

The following are examples<sup>9</sup> of the use of information gathered to constantly improve the teaching and learning processes:

1) **Quantitative information** about teachers: teachers who score <3 (on a Likert 5-point scale) meet with the Dean to discuss the possible reasons for this evaluation and the adjustments and changes that will allow them to perform better in the following academic year.

2) **Qualitative information** is very useful in the design and implementation of improvement measures. If several students repeat a negative comment, it raises a question that should be analyzed to solve the

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<sup>9</sup> These and other examples are referred in the Annual Reports of the FEUC, available, in Portuguese, at <http://www.uc.pt/feuc/apresentacao/apresentacao/index>.

identified problem. The problem can be specific to a CU and, in that case, the responsible teacher can make adjustments. However, if the situation reported in the survey is a general problem, related to the organization of the programme or to the resources of the school, the Management Board of the FEUC can take the lead to solve it. We present below a set of examples that required attention and the proposed solutions to address these problems. They represent different situations reported by students and/or teachers and issues related with a specific CU or a set of CUs of a specific degree or a FEUC crosscutting issue. The examples are not organized by chronological sequence; their presentation intends to show different types of situations and problems.

– Strong concentration of the assessment moments in the 2nd semester of the 2nd year of the Economics degree – this problem was mentioned repeatedly by the students in the surveys (2017/2018 and previous school years) and at the meetings of the Pedagogical Council (PC), which approves the types and timings of the assessment. The analysis of the comments of both students and teachers, allows us to conclude that student workload in this semester/degree was very heavy. The Management Board of the FEUC held a meeting with the programme director and with all the teachers of the CUs. This resulted in changing the type of assessment of one CU and in the assessment schedule of another, thereby mitigating the problem. The survey of the 2nd semester in the following year (2018/2019) did not highlight these issues.

– The teaching staff mentioned, repeatedly in the surveys and in the self-evaluation reports, its heavy administrative workload (e.g., exams surveillance of CUs not taught by themselves, bureaucratic work, among others). In 2015/2016 the board of the FEUC trained Ph.D. students to monitor written exams. The teachers were relieved of this burden during the exam period and recognized the increased quality of the exam surveillance work.

– Students used to mention the lack of space to meet and perform group work. In the same year, the Board of the FEUC decided to reallocate 2 rooms for this purpose. There is also a project (waiting for administra-

tive authorization) to build a room, accessible from the outside, available for student work and study.

– Teachers' and students' comments are cross-checked to find important issues. For example, in 2018/2019 the students of the International Relations degree highlighted the need to review how the English/French CUs run. Students suggested they should attend classes according to their previous level of English/French. The teachers also mentioned the same advantage. Therefore, the CU must be redesigned with the support of the FEUC services to draw up more demanding timetables (the students choose their class according to their English/French levels). This means that the timetable needs to be adjusted for the other CUs.

**3) The survey information is imparted with the PC**, who is responsible for ensuring the good teaching and learning quality and with the "Pedagogical Monitoring Committee", a group of teachers who discuss, in cooperation with the FEUC Management Board and the PC, teaching and learning-related matters. Situations requiring intervention and solutions are addressed to the PC. For instance, in the 2012/2013 academic year a recovery plan was proposed for one CU of the Economics degree (field of knowledge – Accounting) that had high failure rates (information reported by the IQAS). The action plan focused on the success of the students that had already failed in this CU: it was taught only for repeating students in the other semester of the year. The classes were theoretical-practical, and the group was small, allowing a better adjustment of theoretical concepts, a strong practical component, and closer monitoring of the students' progress. The same was applied to another CU (of the same field of knowledge), in the following year, for the same reason. Both experiences were successful: all participants passed. However, these additional editions were not repeated, because only a small number of students enrolled in the CU. The success of such measures also depends on participant adherence, a bottom-up acceptance is necessary.

Another example concerns the promotion of students' independent study, a topic that was addressed in many discussion forums. The teachers of one CU of the first year of the Economics degree (field of knowl-

edge – Mathematics) proposed changes in the organization of the CU in 2018/2019 to equip students with the skills to work on their own. Practical classes were replaced with tutorials, without mandatory attendance, and extended teacher contact time with students. More learning materials were prepared with a large number of questions and problems (solved and not solved) available to students. Comparing with the previous years, class attendance decreased in the year and demand for teacher support was weak. Students and teachers agreed that tutorial classes were too short to solve questions. The pass rate went down. The experience was evaluated and abandoned, and the teachers recommended that, in the future, the promotion of independent study should be directed to the CUs of the last year of the degree programme.

### **3.3. Meta-evaluation meeting at FEUC**

The meeting at the end of the academic year in FEUC is the forum to disclose the result of the survey analysis. The main quantitative indicators are presented as well as a summary of the qualitative comments and a summary of the study programmes self-evaluation.

For instance, in the meeting covering the academic year 2017/2018, held in November 2018, it was presented the problem reported by students of the strong concentration of assessment moments and the solution found for the following year. In the same meeting, the training and recruitment of PhD students in previous years were evaluated as a relieving of the burden for teachers, who considered this action very positive. This procedure remains until now. Also, the availability of more spaces to study was positively evaluated by the students.

Among others, the action plan suggested in the previous year “to renovate the auditorium and other spaces” was completed and it was announced on the UC site. One of the action plans for the following year was “to remodel and to reorganize the FEUC’ internet site” since the programme directors refer to the communication with the external environment as one of the weaknesses of the FEUC programmes.

Finally, the FEUC Management team elaborated the 2017/2018 self-evaluation report incorporating this information.

#### **4. Student evaluation of teaching and learning quality and teaching performance evaluation**

Student satisfaction and perception of the quality of teaching, i.e. the performance of the teachers, is today one of the indicators of the evaluation of teaching and learning quality. According to Sursock (2015), at the European level, a survey completed by students, in 93% of the 451 HEIs studied, has been the most used instrument to assess the quality of teaching. Teaching portfolios (45%) and peer feedback (37%) are also used, although much less than the survey. The evaluation of the teaching performance by students translates into an institutional self-evaluation procedure, which has been used on an international scale (Spooren et al., 2013; Bisinoto & Almeida, 2017).

As Silveira and Teixeira da Rocha (2016) stress, the absence of student evaluation of teaching can have some consequences. For teachers, it does not provide feedback on their activity, i.e. it does not allow them to know what their strengths are and what teaching and learning practices need improvement (Marsh, 1984). On the other hand, students are unable to communicate formally with the study programme and express their opinion during the studies. However, concerning student evaluation of teaching and learning quality, there are two opposite views about its use for evaluating teaching performance (Coelho, 2013).

Those who agree to integrate student feedback in the evaluation of their teaching performance believe that students and teachers have a similar opinion about what it means to be a good teacher. In a study by Ventura et al. (2011), the following were highlighted as essential indicators in the student perception about the characteristics of a good teacher: knowledge of the subject and the organization of the CU; the ability to attract and motivate; the ability to develop a good relationship with students; teacher availability and accessibility; being understanding

and tolerant; and being able to relate theory to practice, being demanding, assiduous and punctual. Silveira and Teixeira da Rocha (2016) also acknowledge the following advantages of student evaluation of teaching: it helps teachers become aware of the strengths and areas for improvement, which can encourage them to improve their teaching practices; guides teachers who are at the beginning of their career and who did not receive special teacher training; it can diagnose and provide feedback to the institution on the effectiveness of its faculty for promotion purposes; provides information to students that will help them select CU, and provides educational research activities.

Although most higher education students are in favour of contributing to these evaluations, they also ask whether the results obtained are used to set new policies, strategies and measures for improving the quality of teaching and teacher training (Asassfeh et al., 2014; Bisinoto & Almeida, 2017; Iqbal et al., 2016; Kite et al., 2015).

Those who are against student evaluation of teacher performance believe that students do not have the appropriate skills to judge the quality of teaching, since they do not have much experience. They even believe students are incapable of conducting this kind of evaluation (Teixeira, 2010). On the other hand, teachers are generally unhappy about the evaluation of teaching performance where students are the only appraisers of the teaching and learning process (Santo & Santos, 2010). Likewise, Burden (2010), Chan et al. (2014), Spooren et al. (2013), and Wong and Moni (2014) question the validity and the effective use of student evaluation of the quality of teaching. The reasons put forward by many teachers who are against student evaluation include: the fear that the organization will only use this information to evaluate/judge performance; students who punish teachers for not doing well in the CUs; some teachers see the evaluation as a popularity contest and believe it does little for the appreciation of scientific knowledge; and teacher perception that students have insufficient knowledge to assess the quality of teaching (Chonko et al., 2002).

Since the evaluation of teaching performance is so complex, it makes sense to follow “a multidimensional model, encompassing the multiple

aspects of teaching and learning, including the effective participation of students, inferring their perceptions about the quality of teaching and the performance of the teachers themselves” (Ventura et al., 2009, p. 59). Thus, the use of diverse and complementary instruments, combining teacher self-evaluation with peer-evaluation, using external observers, and student perception, is an asset (Morais et al., 2006). Although evaluations performed by students are a point of disagreement, of course triangulated gathering of the data can be done with other sources, such as peer evaluation or teacher self-evaluation (Nascimento et al., 2010), which ensures the validity and fidelity of the process. When used appropriately and duly adapted to the target audience, teaching and learning surveys can constitute a most relevant evaluation tool, as they promote the participation and involvement of students and teachers in a joint process of continuous improvement in the quality of teaching (Coelho & Oliveira, 2010; Graça et al., 2011). In this regard, Sarrico (2010) states that by involving students in the evaluation process there is insight about their educational experience and about the quality of the institution, i.e. about its physical and human resources, the teaching skills of teachers, as well as on the structure and curricular organization and the study cycle operating conditions. At the UC, students’ evaluation of the “global quality of the teacher” is used as an indicator for the teacher pedagogical performance evaluation, among other information (like the number of CU and their weekly working hours, the supervision of Masters dissertations and Phd thesis and the publications that support students learning)<sup>10</sup>.

In this sense, it is very important that the HEIs encourage students to complete the teaching and learning quality evaluation surveys, which have an essentially formative dimension for the educational success and personal and professional development of teachers (Carreiras, 2012). Also, for the evaluation of the teaching and learning quality, teachers must reflect on their teaching and learning programmes. Facing the challenge

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<sup>10</sup> The teacher’s performance evaluation is regulated by the Regulation number 398/2010 of 5 May (Regulamento de Avaliação de desempenho dos docentes da UC). Beyond the teaching activity, the teacher’s performance is also assessed in the following areas: research, knowledge, transfer and management.

of obtaining financial support, HEIs encourage communication and feedback between different stakeholders for the evaluation (Ramos, 2018).

In summary, although the evaluation of teaching and learning quality in HEIs was a difficult and necessarily contextualized process, it is an important tool to ensure the improvement of teaching and learning, also assuming a systematic self-evaluation practice that, in addition to teachers and peers, must include student evaluation inputs.

## **5. Conclusion**

Nowadays, the evaluation of HEIs, their programmes, CUs and teaching process is crucial for the continuous improvement of their teaching and learning quality. In Portugal, A3ES encouraged HEIs to implement and certify IQAS as an important step for promoting the quality and excellence of education in these institutions. An IQAS should be developed according to a bottom-up strategy that allows greater participation and involvement of all stakeholders. The UC developed an IQAS that, at the teaching and learning level, allows to know student and teacher evaluations of the operating conditions of the functioning study cycle, the CUs, and the quality of teaching. Based on this information, teachers and programme directors identify some improvement actions to be implemented in the following semester/year and to be monitored in the following evaluation exercise. Each department/faculty must evaluate the objectives accomplished to also set future improvement actions. These are subject to a meta-evaluation by the faculties' management bodies and by the rector and the vice-rector for quality evaluation, in conjunction with the strategic and quality plans.

The experience and examples of the FEUC are presented, showing how the information provided by the IQAS is used to set up and implement improvement measures.

Although some arguments underestimate the contribution of students to teacher performance evaluation, there are important benefits of student evaluation, namely: feedback for teachers, guidance on teaching practices,

feedback for the HEI, student and teacher participation and involvement in a joint process of continuous improvement.

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THEME 2

**PROFESSIONALISATION OF TEACHING  
AND ACADEMIC DEVELOPMENT**

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## **REWARDING UNIVERSITY TEACHING – A CASE STUDY FROM LUND UNIVERSITY**

**ABSTRACT:** The Pedagogical Academy at the Faculty of Engineering (LTH) at Lund University, Sweden, is a scholarly, research-based and reward-system that has been developed to bring increased status to teaching and learning, and to improve the overall pedagogical competence of the organization. Scholarly approaches to teaching are rewarded by monetary incentives to both individuals and departments for their efforts to increase the quality of teaching and student learning. The idea, from an organizational perspective, is that an intensified and informed pedagogical discussion among teachers will foster educational development at all levels within the faculty, and an increased engagement in the scholarship of teaching and learning. Applicants must show how they have, consciously and systematically, endeavoured to develop means of enhancing students' learning *in their discipline*, and how they have made their experience in teaching available to others in the academic community (especially at the local level). They must also be able to analyse and reflect on their teaching practices using the higher education literature and other sources of information and show how they have used these to develop their understanding and their practice concerning teaching and the learning process.

In this chapter, we describe and analyse the reward system including evidence of quality and impact. We also discuss future challenges and outlook. Major findings (based on own investigations and external benchmarking) include important indications of institutional development and teaching quality, the development of teaching portfolios and national and international leadership and development.

**Keywords:** teaching excellence, reward system, scholarship of teaching and learning, institutional development

## 1. Introduction

The importance of teaching skills and excellence in university teaching is acknowledged world-wide and several reward system initiatives have been implemented (Land & Gordon, 2015; Skelton, 2004, 2007), especially in Australia, the UK, and the Nordic countries. This development is also driven by an increased attention to quality assurance and development in higher education. For example, Australia and the UK reward excellent teachers through professional frameworks on a national level, mainly with prizes and fellowships (Chalmers, 2011; Turner & Gosling, 2012). These initiatives, as for example the UK Professional Standards Framework (UKPSF), focus primarily on individual career development whereas reward systems in the Nordic countries are more locally developed and tend to be more directed toward institutional development (Meld. St. 16, 2017; Olsson & Roxå, 2013).

We argue that institutional development should be overarching and include individual career development, but it is also important to be aware of how academic structures can hamper and support institutional development. Our research investigates how criteria and processes used for assessment of teaching excellence support individual career development as well as institutional development. Systems where different assessment criteria are equally important and could be reached by all academic teachers tend to support institutional development whereas systems that are more hierarchical tend to favour individual career development.

The focus of a reward system should always be to influence the development of teaching and student learning, and this process must be backed up with research and scholarly investigations. Based on case studies from different universities, combined with self-study research (LaBoskey, 2004) and an autoethnographical approach (Adams et al., 2015; Ellis et al., 2011), we examine how significant and critical aspects influence systems and processes from both individual and institutional perspectives. We are aware of on-going methodological discussions, but self-study research is an excellent way to get detailed knowledge about practices and developmental processes. The data used are documents

and narratives combined with interviews and discussions within relevant networks in Nordic and international higher education, and personal experiences from actual processes.

The Nordic countries are at the forefront internationally, illustrated by the fact that more than 20 institutions of higher education have implemented reward systems and at least 10 more are in the development process (Winka, 2017).

## **2. Academic development approach**

The main idea behind academic development at the Faculty of Engineering (LTH) at Lund University in Sweden is to influence teaching cultures so that teaching is taken more seriously, i.e. is talked about more and in more scholarly ways on all levels in the organisation. The rationale for this approach can be summarised through Caldwell's (2006) review of organisational change literature, where he focuses on the question: Why do things change (or not) in organisations? He answers this question by focusing on who can initiate change (who has agency) in an organisation. He suggests four levels of agency: individuals, workgroups, the line organisation, and external discourses. If these levels were aligned with each other, change would happen almost automatically. If one or more levels oppose the others, conflicting agencies can lead to deadlock. Change will not happen. Thus, in attempts to develop an organisation, the four levels of agency should be treated as one system.

At LTH, development activities focus on three levels: individuals, workgroups, and management, and address the wider discourses through participating in national and international conversations. Following a cultural perspective based on Caldwell's account and the fact that most organisational learning happens outside activities organised by academic developers, it is assumed that if teachers and others at LTH engage in *more and more informed conversations about teaching and learning* with colleagues during everyday activities, then teaching cultures at LTH are influenced. In short, *the organisation supports an emerging culture of*

*scholarship of teaching and learning* – also a fundamental aspect of our system for rewarding excellence in university teaching (Felten, 2013).

### **3. LTH's Pedagogical Academy**

#### **3.1. Objectives and context**

LTH's Pedagogical Academy is a reward-system that has been developed to bring increased status to teaching and learning, and to improve the overall pedagogical competence at the Faculty of Engineering. Scholarly approaches to teaching are rewarded by monetary incentives to both individuals and departments for their efforts to increase the quality of teaching and student learning. The idea, from an organizational perspective, is that an intensified and informed pedagogical discussion among teachers will foster educational development at all levels within the faculty, and an increased engagement in the scholarship of teaching and learning.

#### **3.2. Description**

The Pedagogical Academy is scholarly, research based, and aligned with basic academic values within the organization. Applicants wishing to be admitted to the Pedagogical Academy must show how they have, over a period of time, consciously and systematically endeavoured to develop means of enhancing students' learning *in their discipline*, and how they have made their own experience in teaching available to others in the academic community (especially LTH and Lund University). Applicants must also be able to analyse and reflect on their teaching practices using the higher education literature and other sources of information and show how they have used these to develop their understanding and their practice concerning the teaching and the learning process.

The Pedagogical Academy was developed in 2000-01 and the first teachers were accepted in 2002. After a few years, the entire process was

researched and evaluated, together with researchers from the research centre Learning Lund and the Department of Education, which resulted in partly new criteria and an improved admission and assessment process from 2006. This process was further developed with new criteria related to the discipline and external participation in the assessment group from 2018. The total number of submitted applications between 2002 and 2019 is 204, and the number of accepted applications is 132. The number of applications per year has increased during the last three years.

For assessment on qualitative bases, aspects that the applicant wishes to bring forward should be made visible in the application submitted for assessment. Applicants should describe, analyze, discuss and submit evidence in relation to four overall assessment areas comprising a total of ten criteria.

The following ten criteria must be met for a teacher to be admitted to LTH's Pedagogical Academy and obtain the distinction *Excellent Teaching Practitioner (ETP)*:

1. A clear focus on undergraduate and graduate students' learning
  - The applicant's teaching practice is based on a learning perspective.
  - The applicant's teaching and learning philosophy and teaching activities constitute an integrated whole.
  - The applicant's teaching practice is based on a sound relation to students.
2. Subject knowledge – a developed ability to incorporate the discipline in a teaching and learning context
  - The applicant uses developed strategies to support students' work toward increasingly complex and useful knowledge.
  - The subject content and teaching methods are related to the courses and objectives of the curriculum.
3. Clear professional development as a teacher over time
  - The applicant shows an effort has been made over time to develop students' learning consciously and systematically.
  - The applicant has credible ideas and concrete plans for continued development.

#### 4. A scholarly approach to teaching and learning

- The applicant reflects on the teaching practice based on educational theory relevant to the discipline.
- The applicant searches for and creates knowledge about student learning in the discipline.
- The applicant goes public and collaborates and interacts with others and shares pedagogical experiences – e.g., in discussions, working groups, conferences and in publications.

The most important document in the assessment process is the applicant's teaching portfolio, which forms the framework of the description and analysis of the applicant's pedagogical practice. The portfolio should be related to the assessment criteria, and examples of activities should be supported by certificates, testimonials, references, or other documentation. The application also includes a CV, a written recommendation from the head of department, and testimonials of discussions with two critical friends (with the distinction of ETP) (Handal, 1999).

The assessment process consists of several steps described in detail below. To ensure a comprehensive and professional assessment, recommendations, and assessments by heads of departments, students and assessors are summarized in the assessment group's formal assessment submitted to the teacher appointment committee.

- *The teacher appointment committee*

The teacher appointment committee has the overall responsibility for the assessment process and assigns assessors and duties to the assessment group. The committee proposes the dean of LTH to accept or decline applications based on the recommendations of the assessment group.

- *Assessment group*

The assessment group comprises previously rewarded teachers (selected by the teacher appointment committee) who evaluate the applicant's qualifications. The assessment group also includes an external assessor from another university, and an internal pedagogical expert (from the faculty) who supports the process.

- *Comments from the student union*

The student union is given the opportunity to comment on the applicants. This should not include an assessment of pedagogical qualifications but should focus on the applicant's teaching practice, especially how he or she works in relation to the students.

- *Interview*

An interview with the applicant is conducted by three assessors together with the internal pedagogical expert. The interview is a complement to the recommendations of the head of department and the student union, and the applicant's portfolio. It is especially important that the interview confirms that the applicant's teaching and learning philosophy and actual practice form an integrated whole.

## **4. Evidence of quality and impact**

### **4.1. Assessment criteria and assessment process**

A fundamental aspect of a reward system is the criteria that form the basis for the assessment. Although criteria used for assessment differ between reward systems, it is possible to cluster them into different categories (Ryegård et al., 2010). We can identify at least six categories: focus on student learning (including evidence for learning results); ability to incorporate the discipline in a teaching and learning context (pedagogical content knowledge (Shulman, 1986) in practice); professional development over time; scholarly approach to teaching and learning; and pedagogical leadership (actively leading and promoting educational development). What evidence we should look for in a teaching portfolio depends on how we interpret the different criteria behind these categories. Results show that universities and faculties use criteria or specific indicators to show their definition of teaching excellence and they often do this to highlight explicit institutional priorities. Our investigations indicate that systems where different criteria are more equally significant and (in principle) can be reached by all applicants support institutional

development whereas systems that are more hierarchical tend to favour individual career development. Hierarchical systems often require academic, institutional, national, or global leadership positions for applicants to reach higher teaching excellence positions, and this could conflict with the developmental purposes of a reward system. Criteria that build on each other in a hierarchical order will most likely favour individual career development, at the expense of institutional development supported by many academics at different positions engaging in, and being rewarded for, scholarly excellent teaching.

In the Nordic countries, we have primarily implemented reward systems that focus on institutional development.

An important indicator (from LTH) of institutional development in relation to excellence in teaching, is that teachers appointed to the Pedagogical Academy are significantly overrepresented in important positions within the faculty (Table 1). This includes the program board, program leaders, research boards, the postgraduate education board, and teacher appointment committees, as well as heads of departments, faculty leadership, and the faculty board. The fact that rewarded teachers are seriously involved in policy and decision making is important for the institutional development of teaching and student learning.

<b>Boards and committees</b>	<b>Proportion of teachers (%) with ETP related to all teacher representatives</b>
Program board	43
Program leaders and assistant program leaders	25
Postgraduate education board	25
Research boards	22
Recruitment committee	25
Career committee	25
Heads of departments	39
Dean, deputy dean and vice-deans	40
Faculty board	56
<i>All academic teachers at LTH</i>	<i>18-20</i>

TABLE 1: Proportion of ETP teachers on boards and committees at LTH (2019).

The assessment process is often performed by assessors from other universities. However, the assessment can also be an internal process, or it can be a combination. If we focus on quality development, an internal or partly external process is preferable. An entirely external process is closer to research assessments, but the assessors' lack of institutional understanding is often a serious shortcoming. The assessment group at LTH for 2018 consisted of 20 ETP teachers and one external member. Over the years it has always been very easy to get competent teachers to be part of the assessment group and to continue to be active for several consecutive years. Even without monetary incentives the assessors consider the assessment process as an interesting and rewarding task, and all but two of the assessors were willing to participate in 2019 as well, which is a very good indication. The assessors are essential for pedagogical development as they carry important assessment experiences that enrich the pedagogical conversation at the faculty.

Teaching portfolios are used in the application process and include descriptions and analyses of the teaching practice (Olsson & Roxå, 2013). Concretion is of fundamental importance, and a portfolio is about an applicant's teaching in relation to the students' learning of the actual discipline. Furthermore, the importance of the discipline is imperative, and it is the pedagogical content knowledge (Shulman, 1986) that is crucial. The quality of teaching portfolios has increased over time in relation to the complexity of reflections about disciplinary teaching practices, the scholarly approach, effects of teaching on student learning, and sharing/dissemination of expertise and best practice (Larsson, et al., 2015). The development process has resulted in improved criteria and assessment procedures, and new models for defining teaching quality and excellence (Olsson & Roxå, 2013, Olsson & Roxå, 2012). Lund University was the first Nordic university to launch a reward system in 2001 (Olsson & Roxå, 2013) and our experiences and our research point toward engaging and well-adapted teaching that is not old-fashioned or restrictive and where the engagement between teachers and students is essential for the quality of learning.

## 4.2. Teaching Quality

The question concerning whether the rewarded teachers organise and conduct high quality teaching is paramount. LTH uses the Course Experience Questionnaire (CEQ) by Ramsden (1991), to evaluate most undergraduate courses. The questions are clustered around good teaching, clear goals and standards, experience of workload, assessment oriented towards understanding, and overall satisfaction. CEQ scores for courses in which rewarded teachers are heavily involved were compared with all other courses at LTH for four different years (Olsson & Roxå, 2008; Borell & Andersson, 2014). The results show courses led by rewarded teachers receive significantly ( $p < 0.001$ ) better CEQ results than others, especially regarding overall satisfaction and good teaching. The conclusion is that overall, rewarded teachers lead courses that support high quality learning and a deep approach to learning, as measured by the CEQ, i.e., student experience.

## 4.3. Swedish development and national leadership

LTH pioneered the concept of pedagogical academies when our system was introduced in 2001. Since then, LTH's ETP system has been an inspiration for many higher education institutions in Sweden (Figure 9). The Faculty of Science at LU followed in 2003, and between 2007 and 2017 another 25 reward systems have been introduced (Winka, 2017).

LTH's ETP system is also a model for all similar systems introduced in Norway (in particular at the University of Bergen and at NTNU in Trondheim), and it was presented as an example in a report to the Norwegian Parliament in 2017 (Meld. St. 16, 2017). In Denmark, LTH's reward system was highlighted in a report from 2014 (Danmarks Akkrediteringsinstitution, 2014) and they wrote (translated from Danish): "...at Lund University where, during the last 15 years, a Pedagogical Academy has been developed that admits the best teachers. All Danish universities

are inspired by this work – and by other countries in general – but the concrete implementation still remains.”

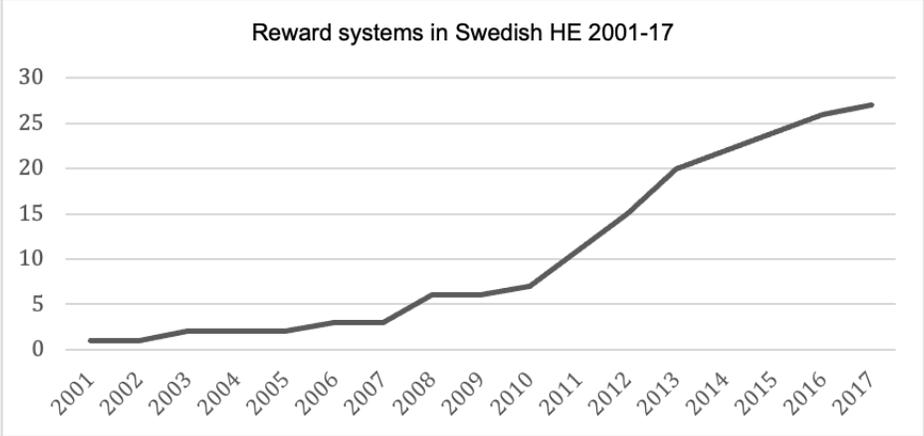


FIGURE 1: Number of pedagogic reward systems at Swedish HE (Winka, 2017). The first was the ETP system at LTH.

Experienced assessors of university teaching from Umeå University, Uppsala University, Stockholm University, Mälardalen University, Linköping University and Lund University have developed and instructed a national course for presumptive assessors. The course is supported by the Swedish Network for Educational Development in Higher Education (SWEDNET, a part of ICED) and has been offered on seven occasions (2010, 2011, 2012, 2013, 2015, 2017, and 2019) at different host universities in Sweden. The aim of the course is to drive quality enhancement by enhancing the capacity to assess pedagogical qualifications at universities locally, through support and education at a national level. The course corresponds to one week of full-time work and to date about 150 participants from 24 different universities and university colleges have passed the course. The course will be offered again in 2020.

#### **4.4. External assessment and benchmarking**

Associate Professor Maja Elmgren, Uppsala University, was the external assessor in the 2018 assessment process of the applications to the Pedagogical Academy. She is frequently used as an assessor of pedagogical competence at major Swedish universities. Her assessment is strongly supportive of the model used by LTH, a primarily collegial assessment complemented with an external assessor. She also suggests that LTH might consider criteria in respect of pedagogical leadership and more explicit outreach requirements.

Maja Elmgren summarizes her assessment with the following paragraphs (translated from Swedish):

“My overall impression is that the process is of high quality and that the applicants can feel confident that they get a fair assessment. There was also significant agreement between my preliminary assessments of the applications and the assessments made by the assessment group before our joint meeting. After the discussion, I had no hesitation in supporting the final assessments. LTH’s process of appointing ETP teachers should contribute to a good dialogue on pedagogically important issues. The applicants’ conversations with critical friends give not only the applicants, but also the critical friends, an opportunity to reflect on the actual practice. The assessors’ (previously appointed ETP teachers) interviews with the applicants provide opportunities for mutual development. The assessment meeting, bringing together many ETP teachers for continued dialogue regarding pedagogical competence, with concrete evidence in the form of applications, is also likely to contribute to continued renewal. For further influence on the faculty’s overall pedagogical development, criteria that more strongly emphasize impact on colleagues’, and students’ learning beyond the applicants own teaching efforts, may be considered.

Collegial assessment requires insights into the profession and the context in which those to be assessed work. It is therefore a strength that the process is well integrated with colleagues who have a good knowledge of the practice and the conditions for educational activities. At the same time, academic peer-review assessment should not be too internal. Therefore, I very much

welcome the fact that LTH has chosen to invite an external assessor and recommend that this initiative be followed up by new external assessors who can give their views on individual assessments and perspectives on the process, in coming years.

I am grateful for the opportunity to get an insight into a well-developed assessment practice.”

## **5. Challenges and outlook**

It is obvious from the discussions about the Pedagogical Academy that, using Caldwell's (2006) review, this reward system influences individuals (e.g. status, increased salary, student satisfaction), workgroups (funding for departments, increased and more informed conversations etcetera), the line organisation (rewarded teachers active at management levels), and external discourses (overwhelming national and international interest – e.g. visits, keynotes, workshops). These levels have worked as an aligned system during the past 18 years, since the introduction of the Pedagogical Academy, and in that way supported a successful development of the system.

The assessment process is a key aspect of a reward system, often performed by external assessors from other universities. However, the assessment can also be an internal process, or it can be a combination. LTH has chosen an internal process with external participation that focuses on institutional development and quality enhancement. An entirely external process would run the risk of putting much more focus on the career development of the individual teacher and be more closely aligned with research assessment which often is detached from the institutional context. We would see that as a serious shortcoming, as also discussed in Maja Elmgren's assessment and benchmarking report, she writes:

“The step that has been taken to include an external insight into the process further contributes to national reconciliation. I think this is positive, and that an external member should be a permanent part of the process. An alterna-

tive could be, of course, to include opinions of external experts regarding the different applicants, but then perhaps the positive effects I see with the current process risks being lost”

Plans include criteria relating to pedagogical leadership and increased focus on influencing colleagues beyond their own department, as well as discussions on whether the reward system should consist of one or two levels of competence. Two levels might engage more academic teachers and focus more on institutional quality development, whereas one level promotes more excellence and scholarly research-informed teaching, which might be somewhat discouraging for some teachers.

Finally, we argue strongly in favour of integrated universities where teaching, research and community engagement are kept together and supporting each other as important parts of a comprehensive institution. An illustrating example, as discussed in this chapter, is that (after 18 years with a reward system at LTH) rewarded teachers are significantly overrepresented at important positions within the faculty – supporting the development of teaching and student learning. We also recognise that of 133 rewarded teachers more than a third are full professors, most of them leading active research groups. Further examples comprise increased knowledge of how reward systems influence institutional development. We have shown that rewarded teachers are responsible for courses that support high quality learning and a deep approach to this learning, and we recognise, through examination results and course evaluations, that teaching develops positively over time.

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## **PROVIDING OPPORTUNITIES FOR PROFESSIONAL LEARNING: A SKETCH OF PROFESSIONAL DEVELOPMENT IN THE UK**

**ABSTRACT:** It is generally agreed that advancing teaching in Higher Education (HE) requires more than assuming an affiliation or a predisposition for teaching and supporting learning; having the standing and expertise in a discipline; or a higher qualification like a PhD. Nevertheless, approaches to the professional learning of teachers in HE are inconsistent in Europe. Internationally, there is an increasing awareness that providing initial professional development is necessary to engage early career academics with pedagogy and didactics in order to enhance their approaches to teaching and support for students' learning. Since the introduction of the United Kingdom Professional Standards Framework (UKPSF) the offer of accredited continuous professional development (CPD) has been extended to all staff involved in teaching and supporting learning. Accredited CPD at most institutions in the UK is part of a wider educational development portfolio through which staff are stimulated to engage in professional learning.

This chapter aims to provide the reader with an understanding of the current trends and practices in the UK related to professional learning and professional development. The authors begin by tracing some of the key developments to situate and clarify the current importance assigned to the accredited CPD opportunities. The authors will then present some common approaches to educational development in the sector and provide an insight into the impact of CPD for teaching and supporting learning.

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Together this will allow for a critical overview of the current practices, understanding and value of accredited CPD for those involved in the process.

**Keywords:** Professional development, professional learning, professionalisation of teaching, teaching recognition

## 1. Introduction

Calls and initiatives for the professionalisation, recognition and professional development to raise the quality of teaching and supporting learning have been made nationally and internationally (Chalmers et al., 2015; de Jong et al., 2013; Jacob et al., 2015; Jorzik, 2013; Kottmann et al., 2016; McAleese et al., 2014; Pleschová & Simon, 2013; Huet, 2012; Huet & Costa, 2010; Huet & Casanova, 2020).

Economic, political and social developments have set the multiple agendas for the quality of teaching and supporting learning for institutions and individuals. These drivers for change, to name a few, include: changes in government funding and increased private contributions through student fees; an emphasis on internationalisation, competition and marketisation; growth in numbers and the diversification of the student body; the need for curriculum reforms to ensure inclusivity, diversity and progression, as well as to add value for employment through the inclusion of generic and transferable competencies, digital literacies, and graduate attributes; the casualisation of academic staff through an increased reliance on hourly paid and temporary contracts; and increasingly diverse routes into the academic profession, as well as the diversification of roles and responsibilities at universities (Crosier et al., 2017; Ashwin, 2006; Beaty, 2006; Brand, 2007; Brew, 2007; Brown et al., 2010; Hénard & Roseveare, 2012; Hyde et al., 2013; Teichler, 2010; Whitchurch, 2010). These calls and initiatives to professionalise teaching and supporting learning have not been made in a neutral environment, and it is the premise of this article that the aim, scope and provision of professional development lacks clarity, is contested, and is situated in a dynamic, complex, contradictory and fluid terrain of individual needs

and circumstances, institutional expectations and (inter)national drivers (Di Napoli, 2014; Macdonald, 2009).

The aim of this article is to introduce and discuss the opportunities, nature and impact of professional development, while providing the context for the United Kingdom Professional Standards Framework (UKPSF), which has come to play a significant role in the provision of accredited CPD in the UK and, increasingly, internationally.

## **2. The scope of professional learning and development**

Accredited and formal *professional development* can be defined as a systematic attempt, requiring investment from institutions and individuals, to advance the knowledge, abilities and skills of academic staff, which might lead to the enhancement of teaching practice (Bostock & Baume, 2016; Guskey, 2002; Neame & Forsyth, 2016; Popovic & Baume, 2016). Professional learning is defined here as situated and explicit; it can occur in both formal and informal environments and requires an immersion in professional practice and reflection. The latter can be initiated through self-reflection or professional dialogues between peers which contributes to a better understanding of own's practice (Evans, 2019; Knight et al., 2006; Marsick & Watkins, 2015; Mezirow, 1981).

The professionalisation of teaching and supporting learning has not always been defined in such narrow terms. The emphasis on competencies or skills, or the approaches to, and the practices of teaching and supporting learning, could, from a European continental tradition, be understood through the notion of didactics (Gundem, 2000; Hamilton, 1999; Magnússon & Rytzler, 2019). The notion of HE pedagogy allows for wider and perhaps richer conceptualisations of teaching and supporting learning, which in the UK has been made through the notions of educational or academic development. These notions, although not well defined, might delineate the practice of teaching and the scope of professional learning from a wider setting. The notion of educational development, for instance, might include an appreciation of teaching

and learning beyond the classroom, and stimulate academics to engage intellectually with for instance: the various environments in which it takes place; the diversity of modes and technologies for teaching; the disciplinary epistemologies and professional setting in which it is located and with which it interacts; the institutional processes, policies, strategies and leadership in which it is embedded; and how it is evaluated, investigated and disseminated throughout pedagogical research (D'Andrea & Gosling, 2005; Gibbs, 2013; Land, 2008; Ling, 2005; Macdonald, 2009; Macdonald & Wisdom, 2002; Baume & Popovic, 2016; Stensaker et al., 2017; Stensaker, 2018). Although the semantics might be considered trivial, dominant interpretations assume a link between the accredited professional development and the quality of teaching and learning (HEA UKPSF, 2020; Thornton 2014). These assumptions are travelling fast and globally, and the UKPSF has been adopted in, for instance, Australia, the Middle East, and North America. Providing a more critical framing of the provision and impact of accredited professional development in the UK will be helpful to shed light on the assumed relationship, and how its impact is situated between the individual and managerial realities that underpin engagement with the HEA Fellowships (van der Sluis, 2019; van der Sluis, 2021).

### **3. The United Kingdom Professional Standards Framework**

Overseen and managed by Advance HE, the UKPSF is a framework that aims to “support the initial and continuing professional development of staff” (HEA UKPSF, 2020, UKPSF, 2011, p.2), and is considered an essential framework to drive an improvement in practice, raise the profile of teaching, and benchmark success within HE teaching and learning. The UKPSF (2011) is not a template for an institutional programme, course or scheme, but constitutes a set of professional standards, which are also called Dimensions of Practice (DoP), and four Descriptors. Conceived as interconnected, the DoP constitutes three sets of statements: the Areas of Activity, Core Knowledge and Professional Values. Together they describe

the activities, knowledge, understanding and values that reflect the complexity of teaching and supporting learning in HE (figure 1).

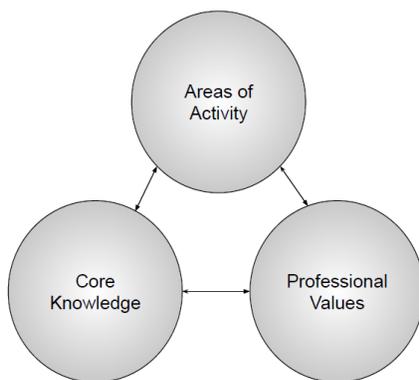


FIGURE 1: UKPSF, 2012

The DoP, in comparison to the professional standards used in other educational settings, are descriptive rather than evaluative or stipulating measures of performance. Not written from a particular educational philosophy or theory, the wording of the DoP is generic, but mirrors national drivers and agendas by paying explicit attention to learning technologies, widening participation and inclusivity, and stimulates a ‘what works’, or evidenced informed approach to enhancing practice (Advance HE, 2020a; Biesta, 2010; Lea & Purcell, 2015).

The Descriptors or HEA Fellowships (table 1) are sets of statements, which outline the key characteristics of four broad roles that are positioned on a debated incremental scale of increasing responsibility, influence and leadership in teaching and supporting learning (Peat, 2014; UKPSF FGN 2012).

#### **4. Wider context of accredited professional development**

The accredited professional development in the UK can be traced back to the early 1990s. Organisations such as the Society for Research in Higher

Education (SRHE), and the Association of Learning Technologists (ALT), and in particular the association for Staff and Educational Development (SEDA) played key roles in stimulating national and institutional initiatives, programmes and schemes, and informed policies to enhance the quality of teaching, well before the Dearing Report (NCIHE, 1997; Beaty, 2006; Brand, 2007; Lea & Purcell, 2015; Smith, 2005; Wisdom et al., 2013). The UKPSF was introduced in 2006 and revised in 2011 and was developed by the Higher Education Academy (HEA) for the HE sector (HEA UKPSF, 2020). The HEA recently merged with the Leadership Foundation and is now called Advance HE (Advance HE, 2020a). The HEA was formally established in 2003 through the merger of two other organisations in 2004, the Institute for Learning and Teaching in Higher Education (ILTHE), and the Learning and Teaching Support Network, constituting 24 subject centres (Beaty, 2006; Smith, 2005). Each of these organisations have left or are leaving a continuous legacy on the conceptualisation of educational development in HE, and evidence the diversity of stakeholders, aims and directions that professional development can take.

<b>Descriptor</b>	<b>Relation to teaching and learning</b>
D1: AFHEA	Individuals with 'some teaching and learning support responsibilities'
D2: FHEA	Individuals 'in more substantive teaching and supporting learning role(s)'
D3: SFHEA	Individuals with a substantial role(s), incorporating the organisation, leadership and management of teaching and provision
D4: PFHEA	Individuals who have a sustained impact at strategic level in relation to teaching and learning
UKPSF (2011)	

TABLE 1: HEA Fellowships (adapted from van der Sluis, 2019)

The emergence of professional standards for teaching and learning in HE and the national and institutional importance assigned to the HEA Fellowships can be traced back to major policy developments includ-

ing the Dearing Report (NCIHE, 1997), The Future of Higher Education (DfES, 2003), and more recently the White Paper ‘Success as a Knowledge Economy: Teaching Excellence, Social Mobility and Student Choice’ (BIS, 2016), which introduced the Teaching Excellence Framework (TEF) (van der Sluis, 2019). These policies have led, for instance, to an increased private contribution to the cost of HE, and stimulated marketisation and competition between HEIs, through measures such as the TEF, the National Student Survey (NSS), student progression, and the Destination of Leavers from HE survey (DLHE). These metrics arguably measure the quality of students’ learning and university services and are used to rank HEIs as a means to improve quality (Blackmore et al., 2016; Gibbs, 2017). The outcome of these measures has had considerable implications for the attractiveness of institutions for students, and as such its position in the league tables. The ranking of institutions in the league tables might have considerable financial implications for a university, therefore there has been a growing pressure to consolidate the institutional policies, strategies and activities to ensure a favourable outcome in the NSS, progression rates, DLHE and subsequently the TEF. Currently the majority of HEIs in the UK have their institutional CPD frameworks accredited by Advance HE, and align their professional development with the UKPSF to support academics obtaining an HEA Fellowship. Moreover, many institutions are setting strategic priorities and agendas for education, such as debated institutional targets, to have all staff benchmarked by a certain time, and integrate the HEA Fellowships as a requirement for probation, promotion, and recruitment (Advance HE, 2020b; Pilkington, 2018; van der Sluis, 2019).

## **5. The provision of professional development: workshops, initiatives, programmes and schemes**

The HEA Fellowships, according to reports by the HEA (Pilkington, 2018; Smith, 2019), have reinforced the importance of professional development for institutions, and the role of senior management in supporting,

rewarding, and prioritising teaching and learning. Departments or schools for educational development have been commonplace at many HEIs in the UK for over two decades (Beaty, 2006; Brand, 2007; Gosling, 2009). These departments have various responsibilities, including, for instance, providing the initial and continuous professional development of academic and related staff, training postgraduate students to take on teaching responsibilities, stimulating engagement with educational scholarship and research, promoting the uptake of educational technologies, encouraging innovations in, and improving the quality of teaching, learning, assessment and curriculum design, and developing and implementing institutional teaching and learning strategies (Gosling, 2009). With considerable variation in the sector, departments or schools are independently located within institutions, or as a unit co-located with other services such as quality assurance, library, student well-being, and/or academic support (Gosling, 2009; Green & Little, 2016). Orientations towards the working relationships with academics and senior management are varied (Land, 2001). However, educational developers might find themselves working on the fault line of (Rowland, 2002), or in the middle between academics and senior management (Hicks, 2005), and increasingly might negotiate their working relationships, professional values and understanding with the institutional agendas and objectives set by the latter (Di Napoli, 2014). The variety of departments and their location within institutions, as well as the diversity of backgrounds and expertise of the educational developers (Green & Little 2016; Holt et al., 2011), show the flexibility of educational development in the sector, indicating how it might be tailored towards individual, faculty and institutional needs and objectives. However, the regular restructuring, in the light of changing institutional priorities highlights the temporary trajectories and fragile position of these departments and individuals. Concerns have been raised about educational developers' agency and ability to build relationships, establish credibility, and provide a sustained contribution to the enhancement of teaching and supporting learning, in the light of changing managerial priorities (Di Napoli, 2014; Fremstad et al., 2020; Field, 2015; Saroyan, 2014; Stensaker, 2018).

Many institutions, as part of their educational development provision, offer structured schemes that focus on, for instance: mentoring and/or coaching, postgraduate supervision, teaching observations, leadership, and professional development for postgraduate students who teach and support learning. These schemes are not always 'owned' and offered by educational developers and other departments. The provision of professional development varies from institution to institution, and arguably can be grouped into two domains: non-accredited workshops, events and institutional initiatives, and accredited programmes or courses such as the Postgraduate Certificates in HE and the recognition schemes (Pilkington, 2016; 2018). Subsequently, both domains will be developed below. However, not all institutions in the UK opt to accredit their programmes and schemes, enabling flexible, tailored and perhaps less generic provision.

### **5.1. Non accredited workshops, events and institutional initiatives**

To support the professional learning of academic staff, institutions offer a range of opportunities for CPD to reflect on their practice. Most educational development departments will, for instance, offer a portfolio of workshops and events, covering various aspects of teaching, learning, and assessment. These workshops could be discursive and explore a broad topic such as active learning, supervision, public speaking, plagiarism, critical thinking, personal tutoring, curriculum design, or evaluating/researching practice; or focus on a specific 'how to' question, such as voice coaching, using a particular educational technology; or develop an approach to teaching, learning and assessment (e.g. flipped classroom or peer assessment). These workshops could be offered as seminars or a series of events, and staff are encouraged to come along by email, newsletter, word of mouth, or a central online portal. These workshops often aim to engage academics intellectually, and stimulate reflection and enhance practice, but the long-term impact is debated (Guskey & Yoon, 2009). Some questions have also been raised, for instance about the decontextualized characteristics of a one-off workshop (Bickerstaff & Cormier, 2015), and

the relevance of a fixed portfolio of workshops considering the varying and evolving needs and expectations of individuals and faculties (Cilliers & Herman, 2010; van Schalkwyk et al., 2015). Nevertheless, reviews by Steinert et al. (2016) and Stes et al. (2010) suggest that workshops might be associated with positive outcomes and changes.

Many HEIs have reported a growing investment in initiatives to stimulate a cultural change, and raise the status of teaching and supporting learning as a result of the TEF (Pilkington, 2018; Smith, 2019). Educational developers develop and promote regular events and networking opportunities, such as annual learning and teaching conferences to stimulate the exchange of practice; reading or journal clubs to encourage engagement in scholarly discussions; and a schedule of seminars with guest speakers and/or colleagues to strengthen the engagement with educational research (Fung & Gordon, 2016; Locke, 2014; Mårtensson et al., 2011). To celebrate and disseminate good practice, institutions reward academics through prizes and awards, and might fund opportunities for small scale educational research projects (Fung & Gordon, 2016; Smith, 2019). Although the direct impact on the enhancement of practice is indirect and considered difficult to measure, the significance of these initiatives has grown within the sector, contributing to the opportunities for the exchange of good practice, raising the status of teaching, and providing tangible benefits for individuals and institutions (Cashmore et al., 2013; Fung & Gordon, 2016; Hum, et al., 2015; Mårtensson et al., 2011; Olsson & Roxå, 2013).

## **5.2. Accredited professional development**

Offering a taught introductory programme for early career academics is well established in the UK, Australasia and is often mandatory and part of probationary requirements (Beaty, 2006; Gosling, 2009; Pleschová & Simon, 2013; Huet & Casanova, 2021). The design of the introductory programmes varies in the sector. They are often structured as a Postgraduate Certificate, PgDip/MA in HE or equivalent in terms of time, investment

and level of engagement required, and aim to provide development across all aspects of the teaching role (Beatty, 2006; Pilkington, 2016).

There is a general expectation that longitudinal programmes “yield outcomes that go beyond teaching effectiveness” (Steinert et al., 2016, p.769), and are more sustained in terms of academics’ future careers. The national and international literature reviews by Prebble et al. (2004), Prosser et al. (2006) and Parsons et al. (2012) have summarised the impact of the taught programmes for academics who are new to teaching and learning in HE. These evaluations have shown that introductory programmes are considered instrumental, and that academics become more confident, effective, efficient and student-focused as a result of undertaking them.

Besides offering initial professional development for early career academics, with the introduction of the UKPSF, HEIs in the UK have begun to offer a structured pathway for established academics to obtain an HEA Fellowship through a recognition scheme (Hibbert & Semler, 2015; Pilkington, 2016; 2018). The recognition schemes vary in terms of their design and structure and the ways in which senior academics are supported. As part of the recognition schemes, academics collate and present their previous experience, engagement, development and influence in a personal, reflective and retrospective portfolio, also called a reflective account of practice (RAP). The RAP is assessed by a panel, against the requirement of a Descriptor. This RAP can be either assessed through an oral examination, also called a professional dialogue, or through a written portfolio. Successful applicants are awarded an HEA Fellowship (Lea & Purcell, 2015; Pilkington, 2013; Smart et al., 2019).

### **5.3. The impact of the HEA recognition schemes**

The impact of the HEA recognition schemes as a form of professional development is not well established. This might come as a surprise considering the uptake among academics in the sector who have applied to the scheme, which has grown to 50%, and the considerable individual and institutional investments made (van der Sluis, 2021). The emerging

literature suggests that the relationship between the recognition schemes and the enhancement of practice needs to be considered with care (van der Sluis, 2019; 2021). The institutional case studies by Thornton (2014), van der Sluis et al. (2017), Shaw (2017), and Botham (2017) show that academics report some changes to their practice, but that these are rather moderate in nature. Applying for an HEA Fellowship through a recognition scheme provides opportunities for the enhancement of practice, and might stimulate, for instance, engagement with workshops and educational literature, as part of the application process.

Value is reported beyond classroom practice. Gaining an HEA Fellowship might strengthen an academic's interest and involvement in mentoring, coaching and leadership (Botham, 2017; van der Sluis, 2019), and provide confirmation and affirmation of their previous commitment to, and investment in teaching and supporting learning, which otherwise would have remained undocumented (van der Sluis, 2019). Moreover, academics become more aware of HE policy developments, and the impact of the TEF and NSS for teaching practice (Shaw, 2017; van der Sluis et al., 2016; 2017; van der Sluis, 2019).

An insight into the long-term impact has been provided through a cross-institutional investigation carried out by van der Sluis (2019), who explored the alignment of the HEA Fellowship with progression opportunities. The HEA Fellowships, in combination with the revised policies for promotion, result in different academic identity trajectories, whereby marked differences were found between academics on teaching and research contracts. Over time, academics' teaching and research identities become validated and confirmed as a result of the HEA Fellowships, as well as being reconstructed and renegotiated depending on desired directions and the institutional opportunities available (van der Sluis, 2019).

The reasons for the limited relevance of the HEA Fellowships for practice have been explored. Leadership is considered pivotal in stimulating academics to engage with the recognition schemes (Platt & Floyd, 2015; Thornton, 2014). Simultaneously, the top-down target setting, and the enforcement through probation and promotion policies, might limit the relevance for professional learning, as academics' motivation is located

externally and their engagement is reduced to the tick box exercise (Di Napoli, 2014; Peat, 2015, Spowart et al., 2015; Spowart et al., 2019; van der Sluis, 2019). The mode and focus of the recognition schemes is also identified as a limiting factor. Reflection is the primary mode of professional learning within the recognition schemes, which are focused on retrospective practice, but it needs to be presented favourably to meet the requirements of the descriptor. Participants are not stimulated to evaluate ongoing practice, nor are they exposed to new knowledge, abilities or skills (Shaw, 2017; van der Sluis et al, 2017). Lastly, van der Sluis (2021) points towards the limited relevance of the DoP, or standards, which are considered to be too generic to meaningfully inform, analyse and problematise ongoing teaching practices. More research needs to be done to fully understand the influence of the HEA Fellowships, but it is suggested that the UKPSF and the provision of the recognition schemes might require a review to strengthen their relevance to practice (Shaw, 2017; Spowart et al., 2019; van der Sluis, 2019, 2021).

## **6. Final considerations**

This brief sketch of the literature has shown that academic developers engage in various activities to create professional learning opportunities for early career and established academics. These initiatives have been given new impetus under the UKPSF. This has led to a renewed interest in soft approaches to academic development such as creating network opportunities to stimulate the enhancement, evaluation and exchange of practice, as well as hard approaches through target setting, and alignment of the HEA Fellowships with probation and promotion policies, and many initiatives in-between (Pilkington, 2018).

Developments are often expressed using spatial metaphors (Lakoff & Johnsen, 2003). The current developments as a result of the UKPSF could be considered a converging movement, towards similarity and homogenisation. As outlined above, HEIs within the UK stimulate the uptake of the HEA Fellowships among academic staff through various

means and have accredited their provision of professional development with Advance HE. Although the accredited CPD schemes vary within the sector, Advance HE is entrusted with accreditation and standardisation to ensure parity in judgment, and the transferability of the HEA fellowships within the sector. An increasing homogenisation of the professional learning opportunities within the sector might be observed as a result.

A shared frame of reference to discuss, analyse, problematise and develop, together with strong institutional support to invest in professional development, will undoubtedly bring many benefits for the practice of teaching and supporting learning; an achievement that is still being pursued by other countries in mainland Europe, as it is the case of the Spanish HEIs.

However, the calls for the professionalisation of teaching and supporting learning in HE are diverse, and have come to the fore as a result of different and sometimes conflicting social, political, and economical movements, developments, perspectives and drivers. Each of these calls differ in their understanding of what HE should be for, and the professional learning required to support it. HE in the UK is characterised as a highly rich and diverse sector, and institutions differ considerably in terms of their historic background, regional connection, orientation towards research or teaching, disciplinary and professional orientation, reputation and standing, and student population (Tight, 2009). Moreover, traditionally academic disciplines have formed the basic organisational units within HEIs, are the source of identity and loyalty among academics, and one of the main reasons for students to advance their education. Differences in ways of knowing and coming to know are considered significant, and have implications for the approaches to teaching within a discipline (Becher, 1994; Jenkins, 1996; Neumann, 2009; Taylor, 2010). Although the UKPSF (2011) aims to acknowledge the diversity of the disciplinary and professional settings, the brief sketch of the institutional implementations and the review of the emerging literature shows that the relevance of the current generic set of standards might need further appraisal as a means to address the diverse aims, and complex needs for professional learning in HE.

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**THE EMERGENCE AND DEVELOPMENT  
OF THE CENTRE FOR THE INTEGRATION OF  
RESEARCH, TEACHING AND LEARNING (CIRTL) AT  
UNIVERSITY COLLEGE CORK, IRELAND 1995-2020:  
RETROSPECTIVE AND PROSPECTIVE**

**ABSTRACT:** The chapter falls within the Case Study genre and tells the story of the emergence and development of one Teaching and Learning Centre (TLC) over time, drawing on its development to chart its progress. It will comment on how it supported and sustained the Continuing Professional Development (CPD) of faculty over such a time span and draw some conclusions about effective policy and practice.

It seeks to ask and answer the following questions: What makes a good TLC? What factors influence the growth of CPD at such a Centre? How do we ensure that such professional development is sustainable, nurturing and effective? In response to these questions, the chapter highlights a number of findings: (i) TLCs are built from the bottom up, but top down support of the institution is also crucial for their development and sustainability. (ii) TLCs thrive best as communities of learning and of practice. (iii) CPD is the *raison d'être* of an effective TLC and has to be sustainable and flexible if it is to be meaningful and enriching. (iv) Since teaching is predicated on learning, CPD in higher education should be focused ultimately on the compelling evidence of student learning and, therefore, on scholarly and investigative approaches.

A companion chapter on research-informed teaching can be found in Section 4 of this publication.

**Keywords:** Teaching and Learning Centre (TLC), Continuing Professional Development (CPD), Community of Practice (CoP), Scholarship of Teaching and Learning (SoTL), Student Learning

## **1. Introduction: Local, National and International Contexts that have impacted the origins and development of CIRTL**

The development of the Centre for Integration of Research, Teaching and Learning (CIRTL, 2015) at University College Cork (UCC), Ireland, did not happen overnight. It is part of an eco-system involving several interconnecting and mutually dependent factors emergent over time. The story begins with the local context at UCC, its history, culture and infrastructure. UCC was founded in 1845 during the Great Famine in Ireland, hence its history of resilience in the face of adversity. It was then called Queen's College Cork, since Ireland was then under British rule (Murphy, 1995). UCC's motto, "Where Finbarr Taught, Let Munster Learn", is still a cornerstone of CIRTL's philosophy, imparting the same enduring message: that teaching and learning are symbiotically linked and interdependent. UCC carries the only motto in the Irish university system where teaching and learning are named and dynamically interconnected. There are now over 20, 000 students at UCC and over 70% of staff who teach them have at least a postgraduate certificate in teaching and learning in higher education, the highest number in the Republic of Ireland university system.

UCC sits on the fringes of Cork city, uniting 'town and gown' (Murphy, 2007). Cork has also been designated a Learning City (Cork, 2017) and UCC has played its part in defining the nature and breadth of this life- wide and life-long learning. In turn, UCC has been influenced by the city in developing and expanding its mission and reach over the years. As Cork's main employer, the university is also influential, financially and economically. In short, there has been an understanding and mutual respect between the university and the city over the years, all of which has subtly influenced the remit and reach of CIRTL and Ionad Bairre, the name of the original TLC at UCC.

The national setting, defined by an emergent, innovative higher education landscape in the 1990s in Ireland, was also highly influential on developments in teaching and learning at UCC. The Irish Universities Act of 1997 (Government of Ireland, 1997), for example, called for the

systematic Quality Review of departments and units in each university and was particularly instrumental in stimulating the renewed interest in teaching and learning throughout the higher education sector. Building on the growing culture of teaching and learning some 14 years later, the *National Strategy for Higher Education to 2030* (Hunt, 2011), which defined policy and practice in Higher Education in Ireland, highlighted the centrality of teaching in the academy and its new remit:

It's not sufficient for academics to be experts in their disciplinary area; they also need to know how best to teach that discipline. They need to have an understanding of learning theories and to know how to apply these theories to their practice. They need to appreciate what teaching and learning approaches work best for different students in different situations (Hunt, 2011, p. 59).

The Report of the Strategy Group went on to underline in its recommendations that “All higher education institutions must ensure that all teaching staff are both qualified and competent in teaching and learning, and should support ongoing development and improvement of their skills” (Hunt, 2011, p. 62). Such a call nationally also added to the teaching and learning imperative at UCC and provided strategy and direction for all TLCs. The National Forum for the Enhancement of Teaching and Learning (<https://www.teachingandlearning.ie/>), is another national body that engages with and influences CIRTl through national projects, funding opportunities and seminar series, designed to engage faculty nationally, as well as locally and often collaboratively, with contemporary themes that impact teaching and learning. The Forum is responsible for leading and advising on the enhancement of teaching and learning in Irish higher education and has done much in recent years to advance the stellar work of its predecessor, the National Academy for the Integration of Research, Teaching and Learning (NAIRTl), which is an integral part of CIRTl's history and this chapter below.

International movements and contexts also played a key role in shaping the history, vision and research focus of CIRTl. The first of these related to the inspirational leadership and vision of Dr. Aine Hyland,

Professor of Education at UCC in the 1990s, who won a joint project with Harvard's Project Zero in 1995, entitled *Multiple Intelligences Curriculum and Assessment*. This project opened up the world of Multiple Intelligences (Gardner, 1999a, 1999b; Hyland & McCarthy, 2009), Teaching for Understanding (TfU), (Perkins, 1993, 1998; Perkins & Blythe, 1994; Wiske, 1998) and the Arts in Education, (Goodman, 1976; Perkins, 1994; Winner, 1992) across the spectrum of education at UCC, and also impacted the pedagogy and ethos of primary and secondary schools in the surrounding Munster region. Such rich theoretical and pedagogical underpinnings continue to influence the understanding of student learning today in CIRTL's professional development programmes, leading, for example, to the current exploration of neuroscience and of Universal Design for Learning (Meyer & Rose, 2000; Rose, Meyer & Hitchcock, 2005; Bracken & Novak, 2019; McCarthy & Butler, 2019) in the pursuit of diversity and inclusion. The TfU model has also had a profound influence on how curricula are designed and how the holistic nature of learning, student performance, authentic modes of assessment and the influence of the disciplines themselves on learning are understood. (Boix-Mansilla & Gardner, 1998; Perkins, 1993; McCarthy, 2008). TfU has meant that faculty can more intentionally integrate research, teaching and learning in their disciplines by making teaching and student learning more visible. Faculty document and reflect on their teaching and their students' learning through a series of teaching and course portfolios, an account of which follows in Section 4 of this publication. Such intentional design and documentation of learning have also ensured a scholarly and systematic approach, facilitating research, data analysis and the development of a scholarship of teaching and learning approach.

The second of these international influences, therefore, is the work of the Carnegie Foundation for the Advancement of Teaching and Learning, out of which the literature on the scholarship of teaching and learning (SoTL) has emerged (Boyer, 1990, 1997). The latter has given rise to the International Society for the Scholarship of Teaching and Learning (ISSoTL) <https://issotl.com> which has impacted the work and publications of CIRTL over the years (Lyons, Hyland & Ryan, 2002; Higgs & McCarthy,

2005, 2008, McCarthy & Higgs, 2005; Blackshields et al, 2015, Green et al, 2020). It has also inspired the Centre's participation in networks, such as its involvement in ISSoTL's creative and collaborative writing groups, and its commitment to EuroSoTL and to various administrative and leadership roles within the ISSoTL organisation, such as VP for Europe, a role held by the co-director of Ionad Bairre, Dr Bettie Higgs, and the ISSoTL Fellowship role, awarded in 2020 to the current author. In the day to day work on teaching and learning, SoTL has also influenced the research methods used by faculty to document teaching and learning, to which we will return in Section 4 of this publication.

Equally, the European University Association (EUA) and its international, theme-based initiatives to improve teaching and learning, foregrounded in their conferences and publications (<https://www.eua.eu/101-projects/540-learning-teaching-thematic-peer-groups.html>), also continue to influence higher education and the research focus of the Centre. Dr Catherine O'Mahony, now director of CIRTL, has particularly championed such involvement, placing CIRTL more centre-stage in a European setting. Consequently, CIRTL has been involved in a number of these theme-based initiatives, leading to international networks and collaborations essential to its sustainability into the future (EUA, 2017, 2019).

Opportunities to build capacity in teaching and learning at tertiary level also abound through Erasmus+ projects (<https://erasmusplus.org.ua/en>) that facilitate development and influence the infrastructure, curriculum design, peer review and critique of pedagogy in developed and developing countries in the field of higher education. CIRTL's role as European consultants in these projects has enabled it to build international expertise and collaborations, and to learn much in the process from colleagues across a wide spectrum of cultures and settings. Effective strategies and innovative approaches to teaching, learning and assessment abound in the resources produced by CIRTL's recent Erasmus+ project collaborations. These include: Assessment Tools for HE Learning Environments (ASSET, 2017) in Israeli and Georgian universities (<https://www.asset-erasmus.com/>); Transforming Assessment Practices (TAP, 2017) in Large Enrolment First Year Education in Pal-

estonian Higher Education (<http://www.tap.pna.ps/>) and Qualifications Recognition Support for Ukrainian Universities (QuaRSU, 2019) (<http://quarsu.nltu.edu.ua/en>). CIRTl is also involved in the UNI-CO-Learn (UNICORN, 2019) University Community Learning project, accessible at <https://www.unibo.it/en/international/european-projects-of-education-and-training/uni-co-learn-university-community-learning>. Such projects have provided international platforms for CIRTl to showcase and extend its work and impact. Likewise, regular, international visits to UCC from such a variety of higher education institutions and international colleagues have ensured that CIRTl has strengthened its global influences and networks and benefited from such partnerships.

Another international context that impacts the Centre relates to its innovative work in supporting Teaching and Learning and Language Development, a programme run jointly with the Language Centre, UCC, (<https://www.ucc.ie/en/cirtl/internationalscholars/>). Several Chinese universities, for example, from Inner Mongolia, Beijing, and Shanghai, have attended Summer and Winter Schools at UCC since 2012. The courses provided during these Schools include a focus on teaching and learning perspectives and professional development, as well as language development. For example, visiting faculty are introduced to the concept of documenting and researching their teaching, as well as to the concepts of diversity and inclusion in student learning and assessment, while also learning English for academic purposes. Given its close relationship with the International Office and the Confucius Institute at UCC, CIRTl has contributed to several Teaching and Learning conferences in China (McCarthy, 2017, 2018, 2019). CIRTl also has links with the new Centre for Ireland Studies at Shanghai University, where CIRTl has contributed sessions and resources on tertiary teaching and learning. Recent links have also been established with Latin American universities keen to take CIRTl's International Scholars programme in teaching and learning in higher education, as well as in language development. Such collaborations serve to diversify CIRTl's CPD offerings and to broaden its reach and pedagogical and cultural understanding of teaching and learning in more global contexts.

Finally, in this era of Covid 19, the development of robust, flexible, diverse and sustainable approaches to teaching and learning in higher education is more important than ever. The academy will need to look to its TLCs, and their champions across the spectrum of disciplines in tertiary settings, for direction and guidance. The institutional supports given to TLCs to ensure that teaching and learning is at the heart of each institution's vision and mission will also need to be examined. The story of one TLC now follows in an attempt to name the essential parts of such a centre, to articulate its challenges and developments, and to provide possible sign-posts and direction for those wishing to advance teaching and learning in their own institutions.

### **1.1. Origins of and Influences on CIRTL**

CIRTL has its origins in the Teaching Development Unit (TDU) at UCC, set up in 1984 to provide courses to support university teaching. This was the first model of a TLC in the Republic of Ireland, providing a cornerstone for the building of subsequent models, locally and nationally. Though the influence of the TDU waned in the early 1990s, due primarily to lack of funding and strategic support, it was instrumental in providing innovative approaches (Hyland, 2002) to teaching and learning. Though its courses were based on the prevailing training model, with its focus on remediation and teacher performance, rather than on the developmental model of investigation and student learning, such courses did bring colleagues together and heightened the profile of teaching and learning at UCC. Indeed, the TDU created a network of colleagues, a baseline community of practice, that later informed the First National Colloquium of the Irish University Association (IUA) on teaching and learning in higher education in the late 1990s.

As part of the transition to an investigative, developmental model of CPD, focused on researching teaching for the benefit of student learning, Hyland planted the seeds for an Accredited Programme in Teaching and Learning in Higher Education for staff/faculty in 1994. Though her

proposal to Academic Council was rejected at that time, due to the lack of funding and strategic support already highlighted, it nevertheless raised the question of the necessity for such a programme and for the professional development needs of staff across the disciplines. Indeed, a new emphasis on CPD at UCC was already emergent by 1995, with the expansion of the Department of Human Resources (HR), where teaching was again taken seriously at the institutional level. As Professor of Education, Aine Hyland was invited to provide workshops for staff in the field of teaching and learning and asked the author, as a new member of the Department with an interest in active learning in higher education, to co-facilitate these. Thus, the first workshop within this developmental model took place during the Staff Orientation held by HR in August 1995. Several staff on the day wanted to continue developing their teaching and their students' learning and so began a five-year span of such sessions, facilitated by the author (McCarthy, 2004). The significance of such work over that time span is that it surfaced the complex issues of the day – such as modularisation, differentiation, multiculturalism, active learning, assessment, and the documentation of learning – and provided a space wherein these could be shared, discussed and critiqued. Such themes also provided the first outline of the curriculum that would inform the accredited programme in teaching and learning some years later. As discussed earlier, the Education Act of 1997 also put the spotlight on teaching as an essential element of the university's regular Quality Review process. Hence, staff were beginning to reflect on their teaching and were concerned about how to capture and document it to impact student learning.

Thus began the shift to a broader concept of Continuing Professional Development (CPD) and the unfolding of a research agenda for teaching and learning at UCC. This, in turn, led to the development of the investigative model prevalent today, where staff at UCC problematise and research their teaching, as they would their disciplinary fields. New funding opportunities in the late 1990s and early 2000s also contributed to the renewed interest in teaching and to its potential as a form of research. It was clear by this time that “a scheme for recognising and rewarding

teaching needed to be introduced and a structured and co-ordinated approach to teaching and learning put in place” (Hyland, 2002, p.9). The Higher Education Authority’s new *Targeted Initiatives* and *Training of Trainers* schemes provided an opportunity for Hyland to apply for funding to recognise and reward teaching excellence and research in 2000. The HEA funding was granted for the 2001- 2002 academic year and marked the introduction of *The President’s Awards for Teaching Excellence* and *The President’s Awards for Innovative Forms of Teaching and Learning*, which are still running successfully at UCC, nowadays through the Office of the Vice President for Learning and Teaching, which was yet to be established at that time.

#### **1.1.1. The Emergence of CPD cornerstones and CoP infrastructure for CIRTL**

There were also several other developments at this time that paved the way for the development of CIRTL and its SoTL philosophy. In her role, as Vice President, for example, Hyland ensured that the Strategic Plan of 2000-2005 (UCC, 2000) recognised parity of esteem for teaching as a valid form of research (Lyons, Hyland & Ryan, 2002, p.6). This was highly significant and marked a change of direction at the institutional level that raised the profile of teaching and had long term consequences, resulting, for example, in the subsequent recognition of the evidence of good teaching as an essential criterion for promotion. From the mid 1990s to the mid 2000s, Hyland also encouraged and sponsored her staff at the Education Department, and members of the new-found, campus-wide Support for Teaching and Learning team, to participate in professional development courses at the Harvard Graduate School of Education. She also provided grants for members of staff across all disciplines at UCC to take one of the many online courses on teaching and learning at the Harvard Graduate School of Education, or to participate in the aforementioned summer schools. Hence, the emergence of a teaching and learning culture at UCC which shaped the future champions and teaching fellows of CIRTL.

By September 2002, there was a ground swell of energy and enthusiasm about teaching and learning, with staff interested in sharing their considerable experience. A call for interest by Aine Hyland produced a core of experienced staff willing to convene a variety of seminars. This enthusiasm was channelled into a programme of activities to support teaching and learning at UCC. Thus grew a coordinated programme entitled “Support for Teaching and Learning”, which also necessitated the formation of a Teaching and Learning Team, composed of interested and invited staff. In May 2003, a successful conference, with 120 delegates, entitled *Advancing the Scholarship of Teaching* was held at UCC. Eighteen staff, from several UCC faculties, presented the results of their research into their teaching practice. Such a conference, with Prof Mary Huber from the Carnegie Academy for the Scholarship of Teaching and Learning (CASTL) as the keynote speaker, gave staff confidence and direction to continue to develop what Huber (Mills & Huber, 2005) was to call this ‘interdisciplinary Trading Zone’, in which educators from all disciplines shared their findings of effective teaching practice.

## **2. The Emergence of Ionad Bairre and an accredited CPD programme**

During the years from 2001-2006, a kind of ‘virtual’ teaching and learning centre existed and through the initiatives described above built up credibility, demonstrating a need for a TLC which would sustain the development of CPD at UCC. Hence the setting up of Ionad Bairre, our first TLC. It was inspired by the work of Aine Hyland, then Vice President and Professor Emeritus of Education, and was co-founded and directed by Drs. Bettie Higgs and Marian McCarthy, to support staff and postgraduate student development in teaching and learning in higher education. The Irish name of the Centre, ‘Ionad Bairre’, or the ‘Place of Finbarr’, relates to the Irish version of the college motto “Where Finbarr Taught let Munster Learn”, already discussed in the Introduction. The choice of ‘Ionad Bairre’ as a name, was a way of capturing the symbiotic relationship and synergy between teaching and learning that already existed in

the DNA of the university motto. Ionad Bairre had no premises at the time and only 1.5 FTE academic staff (Drs McCarthy and Higgs) and 0.5 FTE administrative staff, Ms Nuala Griffin, from the President's Office. A small administrative office was later provided in the Boole library, as well as access to a seminar room there for bespoke sessions. However, the main teaching and learning sessions were held in the university's Council Room, the seat of Governing Body and Academic Council meetings, giving the new Centre visibility, credibility and strategic positioning. It would be 2008 before the Centre acquired its own administrative offices in the West Lodge of the campus, a point of entry to the main campus, adjacent to the Council Room, and close to all services and teaching spaces. Such a location added to Ionad Bairre's visibility and staff called in regularly on their way in or out of campus to ask questions or deliver assignments. The West Lodge is still home to CIRTl and is now more central than ever, since the new Hub, which opened in 2019 and is the first port of call for students, is a stone's throw from the building.

The lunchtime seminars, co-ordinated by Dr Bettie Higgs, had grown in attendance and scope from 2001 and staff became keen to have an accredited programme that would validate their commitment and research. Hence, by 2004, the time was right for such a programme, the HR Staff Orientation groups, Support for Teaching and Learning Seminar Series, and President's Award Schemes providing the emergent culture and interest for such a development. The Accredited Programme in Teaching and Learning in Higher Education was again inspired by Prof Hyland in her original proposal for such a development to Academic Council in 1994. A decade later, the proposal was accepted and the Postgraduate Certificate in Teaching and Learning emerged for the first time in the 2004-2005 Book of Modules. This was a milestone in the history of CIRTl and this author was privileged to become its co-ordinator and director from 2006-2018. The accredited programme consists of a Postgraduate Certificate (30 ECTS), Diploma (30 ECTS), and Master's degree (60 ECTS), in teaching and learning in higher education, all of which are at Level 9 of our National Qualifications Framework (NQF), subject to external examination and to validation by the National University of Ireland (NUI), of which UCC is

a constituent university. To encourage staff to engage with their teaching and their students' learning as an integral part of their research, a SoTL focus informs the Learning Outcomes of each module. In the face-to-face iteration of the programme, between 2004 -2015, each module consisted of 24 hours direct contact, which took place over 6 lunchtime sessions (12 hours) and 3 Saturday sessions (12 hours) per term/semester. Hence, the substantial, year-long commitment of staff to their professional development. The programme continued to thrive throughout the decade, begetting a deeply-embedded culture of debate and critique about teaching and learning, enhanced by the growing scholarship of participants who wrote portfolios about their innovations in the classroom and presented these at conferences and in journals. Though there were only two members of staff at Ionad Bairre, the work was well supported by champions and teaching fellows across the disciplines who reviewed assignments and also taught some sessions. Details of the programme can be found at <https://www.ucc.ie/en/ckb02/>. In 2015, given advances in technology, the ever increasing demands on UCC staff in a post Celtic Tiger era, and the approaching retirement age of the programme director, the time had come to put the course online, ensuring a sustainable programme into the future. Over a three-year period, based on the experience, engagement and response of the first decade, McCarthy designed and wrote a fully-integrated, online version of the programme, in consultation with one of UCC's instructional design team, Claire Fennell. Such a challenge opened up new ways of working, of communication and of assessment and allowed a whole new generation of teachers to access extensive resources online and meet world-class leaders in the field of teaching and learning, in a virtual capacity. An online approach also allowed for international faculty, diversifying the Centre's reach and providing an international network and community of practice for UCC faculty. The numbers of staff engaging with accredited CPD had always been encouraging, beginning with 59 participants in 2004-5, and was consistent across the range of disciplines and Colleges at UCC over that first decade. However, there was a dramatic increase in staff taking the online programme, 80 taking the postgraduate certificate in 2015, while 120 staff signed on for

the programme in the recent 2019-2020 session. This indicates that the movement online was timely, suited faculty and provided flexibility and new ways of engaging with pedagogy and with technology, all of which ultimately benefit student learning. To date, approximately 900 staff who teach (including administrative colleagues at UCC and participants from other universities) have successfully completed at least one accredited programme in teaching and learning at UCC.

### **2.1. The National Academy for the Integration of Research, Teaching and Learning (NAIRTL) and its transition to CIRTL**

The emergence of NAIRTL was the key stepping stone in the development of CIRTL. A Strategic Innovation Fund (SIF) was set up by the Higher Education Authority (HEA) in 2006, inviting collaborative and innovative proposals from the higher education sector in Ireland. NAIRTL was the result of a successful SIF proposal of €3 million, led by UCC, comprising 5 institutes of higher education nationally. NAIRTL's mission was to support academic staff researchers and graduate students nationally to implement and advance effective research-informed teaching and learning practices for diverse audiences. It was effective across at least 35 HE institutions, holding annual conferences, several of which are referenced in this chapter, and devising innovative research projects and award schemes. It became a flagship for the emergent research of academics and graduate students throughout the country. Ionad Bairre seized the opportunities provided by NAIRTL and staff and students at UCC were encouraged to present and publish in NAIRTL conference peer-reviewed proceedings, thereby also sustaining the development of SoTL work at UCC. NAIRTL continued to dominate the HE landscape until 2012, building a huge network of academic researchers nationally and internationally and putting teaching and learning in Ireland permanently on the research map. It made a significant contribution to the development of higher education and laid the groundwork for the current National Forum for the Enhancement of Teaching and Learning (<https://www.teachingandlearning.ie/>).

Since UCC was the lead partner in NAIRTL, it was decided that it would be the custodian and holder of its archive, under the direction of Dr Catherine O'Mahony, who was then NAIRTL's project manager and became CIRTL's manager in the ensuing merger in 2015. Ionad Bairre was already dedicated to integrating research, teaching and learning at the level of its programmes and seminars, but transitioning to CIRTL broadened its scope and remit and gave the Centre the expertise of a manager who provided a new vision and had considerable experience in hosting international conferences and acquiring international grants and projects. Dr O'Mahony became director of CIRTL in 2019 and continues to work tirelessly to advance its profile and direction.

#### **2.1.1. The Office of the Vice President for Teaching and Learning at UCC: Transition from NAIRTL to CIRTL**

A final piece of the jigsaw underlines again the importance of top-down support for TLC's, if they are to be embedded and thrive in institutions. It was most fortunate that the first Vice President at UCC, Prof Aine Hyland, took particular interest in forging the role in the direction of teaching and learning, despite the enormous remit of her brief as VP of the university from 1999-2006. As is already clear from the extent of her prodigious work outlined above, much had been done to promote teaching and learning at UCC and to align it strategically in the institution and give it parity of esteem with research. Given the new focus on student learning in the late 1990s, the importance of CPD for staff, and the mission of teaching and learning in fulfilling HEA performance indicators, the time had come for a Vice President of Teaching and Learning (VPTL) at UCC. Professor Grace Neville became the first designated, part-time VPTL in 2008 (OVPTL, 2008). To date, there have been five VPs who have ultimate responsibility for the development of teaching and learning in the university and can influence policy and practice at the highest level. The title of the Office had a subtle change of emphasis in 2019 to foreground learning (OVPLT, 2019). The current VP, therefore, Prof. Paul

McSweeney, is the first fulltime Vice President for Learning and Teaching in the Irish university system. This speaks volumes for UCC's commitment to teaching and learning and bodes well for the future of CIRTL which now finds itself a key player locally, nationally and internationally in an expanding VPLT's Office.

#### **2.1.1.1. *Findings and Conclusion***

Returning to the questions articulated in the Abstract, some key findings and future directions emerge: A TLC needs to be grounded in the local culture and infrastructure of the particular university, if it is to thrive. In that process, it would do well to nurture a community of learning and of practice over time, in which trust is built and mutual respect for all is nourished. This implies a sensitivity to the diversity of learning across the disciplines and an understanding of the diversity of learning itself. The mainstay of a good TLC is its commitment to the growth of CPD in the institution, in the pursuit of which it needs to listen to staff and students and to be ever adaptable to local needs. A vibrant TLC will also pay attention to contemporary theories of teaching and learning and be guided by national and international movements that are recognised as authentic and influential, some examples of which have already been given in the Introduction. Above all, a TLC that makes a difference will listen to the voice of its students – at undergraduate, postgraduate and post doctoral levels – including its staff as students – for it is at the level of the student that teaching turns into learning. This message is more important than ever in the current pandemic where student learning is more complex and potentially isolating. Equally, a TLC will flourish where it is people centred and where the variety of strengths and talents of enthusiastic champions are welcomed and recognised. Finally, a TLC should align itself with a research mission, since investigation is at the heart of research and will keep the Centre focused on and open to the compelling questions of the day. In the end of all, we need to remember that teaching is 'community property' (Shulman, 1993), not private prop-

erty, and belongs to all in the community. CIRTl continues to explore and expand this *teaching commons*, creating a space in which “...communities of educators committed to pedagogical inquiry and innovation come together to exchange ideas about teaching and learning and use them to meet the challenges of educating students for personal, professional and civic life” (Huber and Hutchings, 2005, p.x). That is CIRTl’s calling, its sustainable mission and enduring legacy.

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THEME 3

**RESEARCH AND TEACHING NEXUS**

(Página deixada propositadamente em branco)

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**FROM REMEDIATION TO INVESTIGATION:  
RESEARCH- INFORMED TEACHING AND LEARNING  
AT UNIVERSITY COLLEGE CORK, IRELAND**

**ABSTRACT:** This chapter explores the development of the Scholarship of Teaching and Learning (SoTL), or research-informed teaching and learning, at University College Cork (UCC). It asks the following questions: how can we move beyond the ‘tired old teaching versus research’ debate (Boyer, 1990)? How can we advance professional development so that we move beyond a training model of remediation to a more sustainable, developmental model of investigation, with which faculty are already familiar in their disciplinary research? Finally, how can we ensure that teaching and learning can be investigated and built upon by all who contribute to student learning in the university?

The chapter begins with an overview of SoTL, its history and impact in the USA. It then discusses how research-informed teaching took hold at UCC through its professional development seminars and accredited programmes run by the Centre for the Integration of Research, Teaching and Learning (CIRTL).

The chapter focuses ultimately on the role of the Course Portfolio model (Hutchings, 1998) as a research methodology and an effective way of investigating teaching and learning and building examples of good practice. The model works well within the ‘kind of action research’ exposed by Schön (1995), where faculty strive to investigate their teaching authentically in their various disciplines, for the benefit of student learning.

The findings of our research on this SoTL method over the past decade confirm the following: that writing a portfolio about a course is teaching, and documenting and reflecting on that process, is an act of investigation and scholarship; that accredited professional development ensures commitment to such research-informed teaching and peer review; and that the benefits of research-informed teaching for student learning cannot be underestimated.

**Keywords:** Scholarship of teaching and learning (SoTL), research-informed teaching and learning, the course portfolio as investigative model, student-centred learning.

## **1. Introduction: The Origins of The Scholarship of Teaching and Learning**

The Scholarship of Teaching and Learning (SoTL) movement emerged in the US as a response to the polarisation of teaching and research; the latter recognised as central to university funding, rankings and promotion, the former seen as the mere transmission of knowledge, with the inherent misconception that time given to teaching was time taken from research (Brew, 2003). SoTL began, officially, with Ernest Boyer's (1990) *Scholarship Reconsidered: Priorities of the Professoriate*, a report from the Carnegie Foundation for the Advancement of Teaching, of which Boyer was president at that time. However, SoTL had its origins much earlier, in the teaching versus research debate, for example, emergent in the contrasting conceptions of a university espoused by Cardinal John Henry Newman (1801-1890) and Wilhelm von Humboldt (1767-1835). Newman's *Idea of a University* (Newman, 1996) which influenced the Anglo-Saxon world and Ireland, considered the university as a teaching institution, focused on the diffusion and extension of knowledge, rather than on its production. Von Humboldt's view, on the other hand, focused on the generation of new knowledge and on a close collaboration between research and learning. This latter position became popular in the US, ultimately overtaking the idea of the colonial college approach, which focused on Newman's liberal education and on character building and preparing new generations for civic and religious leadership. Von Humboldt was a Prussian (German) diplomat and Minister for Education in the first part of the 19<sup>th</sup> century, and founder of the University of Berlin in 1810 (Kreber, 2009). He suggested that universities had two new roles: to teach and to pursue science (the latter referring at that time to all areas of human learning). Whereas Newman made a case for the exclusion of research and the professional schools, von Humboldt thought of the integration of research and teaching as essential to the mission and purpose of a university education. Thus, "by the late nineteenth century, the advancement of knowledge through research had firmly taken root in American higher education, and colonial college values began to lose

ground” (Boyer, 1990, p. 9). Yet both Newman and von Humboldt would agree that an education should cultivate the intellect and offer opportunities for learning for its own sake, rather than for career promotion (Kreber, 2009). Both would have been profoundly disappointed with the subsequent polarising of teaching and research in the academy, which to this day is divisive and destructive of both.

A SoTL-type approach was also anticipated by Robert Maynard Hutchins, fifth president of the University of Chicago, when he suggested, in his inaugural address in 1928, that all departments should carry out experiments in undergraduate teaching and learning. He also advocated that PhD students should be involved in this process and not let loose on the helpless undergraduates (Thompson et al., 2001). McKinney (2004) pointed out that others had also contributed to the discussion of the concept and central role of teaching and scholarship in the academy. Shulman (1998), for example, coined the phrase ‘pedagogical content knowledge’, while others discussed multiple forms of scholarship, including the scholarship of pedagogy (Pellino et al., 1984); and products, such as course content and classroom activities, were also seen as a form of scholarship in the work of Braxton and Toombs (1982). Hence, SoTL seeds were sewn over many years.

### **1.1. Boyer’s Contribution**

Boyer’s (1990) report, however, took centre-stage, emerging at the right time, and capturing the frustration of faculty at a critical point where priorities in the academy were changing: research was now paramount, focused on generating funding, and consequently, on faculty buying themselves out of their teaching, while teachers themselves were overwhelmed with work and had little opportunity to research. Boyer spoke to academics “not in their role as ‘professors’ (members of a university) but in their role as ‘scholars’ (members of an intellectual community)” (Edgerton, 2005, p. xii). Such a distinction would later prove crucial in supporting the idea of teaching as ‘community property’ (Shulman, 2004,

pp. 140-144), and in foregrounding the idea of a ‘teaching commons’ (Huber & Hutchings, 2005), central to the development of CIRTL at UCC, which is explored in Chapter 7 of this publication.

Boyer’s reframing of the research versus teaching debate centres on his use of the word ‘scholarship’ as their common denominator. This allowed him to return to the Middle Ages to capture the rich connotations and history of the word ‘scholar’, which “referred to a variety of creative work carried on in a variety of places, and its integrity was measured by the ability to think, communicate and learn” (Boyer, 1990, p. 15). The primary intent of Boyer’s book was heuristic (Rice, 2005); its intention was to open up the debate and to “reframe the discussion about what staff do as scholars” (ibid, p.17). Boyer (1990) sought a more inclusive view of what it meant to be a scholar: that is, “a recognition that knowledge is acquired through research, through synthesis, through practice and through teaching” (p. 24). With such a new paradigm in mind, Boyer (1990) and colleagues redefined university priorities and faculty roles and responsibilities and were iconoclastic in transforming teaching and learning. Scholarship was redefined within four contexts which sought to bridge the gap between teaching and research and break out of the triad of research, teaching and service by naming four types of scholarship: *discovery*, *integration*, *application* (or *engagement*) and *teaching and learning* (pp.17-25):

- The *scholarship of discovery* comes close to what has traditionally been referred to as research, but it also includes creative work in literary, visual and performing arts.
- The *scholarship of integration* makes connections within and between the disciplines. It seeks to interpret, draw together, and bring new insight to bear on original work.
- The *scholarship of application* seeks to engage academics with the issues of the day – whether these are in the areas of the social sciences, law, commerce, science, medicine, or engineering. In the scholarship of application, theory and practice interact, one informing and reforming the other.

- The *scholarship of teaching* provides the main link between academics/those who teach and their students and initiates them into the best values of the university. Good teachers can imbue their students with the excitement of learning and instil that passion for discovery, which will continue the cycle of research and teaching into the next generation.

It is important to understand that one type of scholarship can beget the other, that all four are dynamically interrelated. Thus, one can make a new discovery in one's teaching, identifying innovative ways of engaging students and of assessing student learning (McCarthy, 2008; McCarthy & Butler 2019). Faculty might also come upon the scholarship of integration by focusing on integrative learning in the classroom (Blackshields et al., 2015). Equally, a team can foreground the scholarship of engagement/application in reaching out to the community (O'Mahony et al., 2019). What is important is that Boyer and his colleagues gave teaching a new status, direction, and trajectory. No longer did teaching have to take place behind closed doors or apologise for its existence. No longer were its 'problems' to be seen in a negative light, begetting a deficit, defensive stance, where either the teacher or the student was at fault. Rather, teaching was now a form of scholarship where it was acceptable to open up the classroom door and let in the light. In this model, teaching ultimately becomes 'community property' (Shulman, 1993, 2004) and invites faculty to 'go public' with their uncertainties, critique their work, learn from others and, ultimately, advance learning – their own and that of their students (McCarthy, 2020).

*Scholarship Assessed* was the sequel to Boyer's report, where the authors (Glassick, et al., 1997) argued that all scholarly work should have the same standards, if it were to be recognised and valued equally: "have clear goals, require adequate preparation, make use of appropriate methods, produce significant results, demonstrate effective presentation and involve reflective critique" (p.25). Such standards also provide a useful guideline for designing research projects and devising and assessing Master's work in this field at UCC. Whereas Boyer's focus was on

reconceptualising teaching, the evolving story of SoTL relates more to learning and its development in the work of Shulman, Boyer's successor, and other scholars whose influential work emerges below. The current co-president of ISSoTL, for example, Nancy Chick (2018, 2021), provides a history of and a contemporary take on SoTL, with regular updates in her virtual office, blogs, and books.

## **1.2. From Remediation to Investigation: SoTL at UCC**

The title of this chapter captures the shift from teaching to learning and its investigative thrust in the work of Randy Bass (1999) who put SoTL principles into practice in his own teaching and sums up the nature of such a journey with the following insight:

In scholarship and research having a problem is at the heart of the investigative process... but in one's teaching a 'problem' is something you don't want to have and if you have one, you probably want to 'fix' it. Changing the status of the problem in teaching from terminal remediation to on-going investigation is precisely what the movement in the scholarship of teaching is all about. (<https://my.vanderbilt.edu/sotl/files/2013/08/Bass-Problem1.pdf>)

This work is one of the 'guiding lights' in our CIRTL programmes at UCC. It is so clear-sighted and useful in helping teachers to identify with their role as researchers, where problems are to be 'opened up' and better questions uncovered, rather than closed down in pursuit of set, technical solutions.

As indicated in Chapter 7 in this publication, taking an investigative stance took time and relied on the building of trust and mutual respect among colleagues. Lunchtime seminar sessions over several years, where staff shared their work, led to the building of a strong research-informed culture around teaching and learning throughout the university. In terms of finding appropriate research methodologies, and ways of capturing and analysing teaching and learning, the portfolio model, well tried and

tested in the SoTL canon, proved rewarding and effective. Initially, staff were introduced to the teaching portfolio model, which invited them to explore a question they had, or a critical moment in class, and to share that through a portfolio entry documenting the issue. The Centre was fortunate in the early 2000s to have funding to invite Prof Nona Lyons, an expert on the portfolio process and on SoTL, as a visiting scholar. Lyons conducted a series of seminar sessions (Lyons et al., 2002) over a number of years which helped embed a culture that embraced ways of documenting, sharing and researching teaching and learning. She gives the following portfolio definition:

A teaching portfolio can be defined as a set of accomplishments of teaching, usually including samples of student work and accompanied by reflective writing and serious conversations with colleagues (Lyons, 2002, p.17).

The writing and sharing of ideas and problems were scaffolded through a series of these portfolio 'entries' which opened up each theme or issue. Staff could also choose the course portfolio model, which focused on a single course and, ultimately, more on student learning. Staff tended to gravitate initially to the teaching portfolio, which allowed them to focus on one aspect of their teaching in a specific entry and to write under five headings which helped to structure their thinking: title, context, rationale, reflection, and implications for future practice. These are explored in detail in Lyons' work (2002, pp.18-19). The entries were presented to colleagues and peers during seminar sessions, allowing faculty to get feedback and support to develop their teaching and advance student learning.

Over the course of 2001-2002, faculty were invited to continue meeting together to share their teaching experiences as potential portfolio entries. In that time alone, some 250 faculty attended seminars and 40 presented portfolio entries from their own teaching portfolio or course portfolio. Exemplars of portfolios from a variety of disciplines in this era can be explored in Lyons' work (Lyons et al., 2002; Lyons, 2003). The teaching portfolio went on to become the investigative corner stone of the Post-graduate Certificate in Teaching and Learning in Higher Education when it

launched in 2004. The teaching portfolio proved to be a flexible research methodology which could be used across all disciplines, the five headings being generic enough to provide structure and direction. To date, over 900 of these portfolios have documented the professional growth of faculty and the trajectory of student learning in the accredited programme.

Since 2000, hundreds of portfolio entries have also been presented by colleagues from UCC at local, national, and international conferences relating to the scholarship of teaching and learning. Several of these are already referenced in Chapter 7 above, prevalent, for example, in publications of the National Academy for the Integration of Research, Teaching and Learning (NAIRTL) which was our research flagship from 2006-2012. The Centre also collaborated with other national projects to advance the portfolio as a research instrument (Hyland et al., 2007). International exemplars of portfolio practice also abound to guide faculty. Good examples are the works of Hutchings (2000); the Carnegie Foundation for the Advancement of Teaching portfolio gallery<sup>1</sup>; and the Peer Review of Teaching Project (2004) at the University of Nebraska-Lincoln<sup>2</sup>: Many more teaching and course portfolios have found their way into SoTL journals, arising from Master's research projects that built on work initiated in either portfolio genre (for example, Barry et al., 2015; Sweeney et al., 2015; O'Keeffe & McCarthy, 2017; Ryan et al., 2018; McCarthy & McCarthy, 2019). With a view to detailing how faculty were supported to build such research, the chapter now turns to a more in-depth analysis of the course portfolio model and its role in identifying and sustaining research into student learning at UCC.

## **2. The Course Portfolio as a method of investigation**

As faculty move to engage more deeply with their teaching and their students' learning in the second year of the accredited programme, the

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<sup>1</sup> [http://gallery.carnegiefoundation.org/gallery\\_of\\_tl/castl\\_he.html](http://gallery.carnegiefoundation.org/gallery_of_tl/castl_he.html)

<sup>2</sup> <https://peerreview.unl.edu/portfolios/showcase>

Postgraduate Diploma in Teaching and Learning in Higher Education, they are required to review and redesign a course they are teaching, using the course portfolio model. William Cerbin, a professor of psychology at the University of Wisconsin-La Crosse, and the inventor of the course portfolio genre, describes it as “like a scholarly manuscript, a kind of laboratory notebook for faculty research into student learning and how to generate it” (Cerbin, 1996, pp.52-56). Hutchings (1998) acknowledges that it is “the unit in which most faculty think and talk about their teaching” (p.17) and that it provides “the context in which content and process, curriculum and pedagogy, come together in a way that has some ‘travel’, some portability for colleagues to identify with and build on” (ibid, p.14). Hence, faculty become aware of its practical as well as intellectual remit, and its potential for research and dissemination among colleagues, teaching the same or cognate courses. Hutchings points out that it is at the level of the course that teaching rises or falls, the course portfolio being a “powerful unit of analysis” (p.14), where “knowledge of the field intersects with knowledge about particular students and their learning” (ibid, p. 14). The course portfolio puts the spotlight on student learning as its organising principle and is, therefore, a powerful catalyst for change and development. It is not so much an account of what the teacher typically does but:

an account of what happens when he or she does something deliberately and explicitly different. It is not, that is, a report of what is, but a purposeful experiment and investigation – a process, if you will, of scholarly inquiry into what might be. (Hutchings, 1998, p.14)

In a chapter in the same book, Lee Shulman sets the conceptual stage for the course portfolio as an act of scholarship and a research method:

Indeed, my argument is that every course is inherently an investigation, an experiment, a journey motivated by purpose and beset by uncertainty. A course, therefore in its design, enactment and analysis is as much an act of inquiry and invention as any other activity more traditionally called ‘research’ or the scholarship of discovery. (Shulman, 1998, p.5)

He gives teaching its full context, seeing it as more than the interactions between teacher and student in a classroom setting, rather: “it is an extended process that unfolds over time. It embodies at least five elements: vision, design, interactions, outcomes, and analysis” (ibid, p. 6).

## **2.1. Key elements of the course portfolio research method**

The course portfolio begins with the *Design* of teaching which Shulman (1998) sees as the development of a research proposal:

The design can take the form of a course syllabus, a course outline, or even an argument for the development of a course. Usually, the design will take the form of a detailed sequence of teacher and student activities, including topics, readings, projects, assessments, exhibitions, competitions or demonstrations. (p.6)

In short, in Hutchings’ words: “the course begins with significant goals and intentions which are embodied in its design and expressed in the syllabus and other documents” (Hutchings, 1998, p.16).

The second element relates to the *Enactment* of teaching, which focuses on how the course is brought to life. Shulman is conscious of the complexity and demanding nature of teaching and his detailed naming of parts hint at what might go into this section of the portfolio:

It demands technical skills such as lecturing, conducting discussions, engaging in Socratic questioning, monitoring individual or collaborative projects, assessing student learning both informally and formally, and making midcourse corrections as needed. (Shulman, 1998, p.6)

The *Enactment* of teaching, therefore, relates to entries that focus on how the course engages students and could include a learning journal, observations, diaries, videos of classroom practice, or videos of the students at work and so on.

The third and crucial element of the course portfolio relates to the *Results* of teaching, or *Student Learning*. In Shulman's terms:

a course once designed and enacted must yield tangible outcomes, changes in student skills, understanding, values, propensities or sensibilities. An account of teaching without reference to learning is like a research report with no results. It lacks its most essential ingredient (ibid, p.6).

Hence, this third portfolio entry focuses on evidence of student work, student performance and understanding. The idea of results goes beyond examination results, though it can include these. In keeping with the investigative approach to teaching and learning, the focus is more on authentic and ongoing assessment of student learning, which can be captured in student presentations, discussions, one-minute papers, projects and so on.

## **2.2. The Course Portfolio Rubric as a catalyst for learning**

All assignments on the accredited programme are supported by instructional rubrics (Andrade, 2000) and guidelines to maximise learning opportunities for staff and their students. As members of the Centres' teaching team, Drs Anna Ridgway and Marian McCarthy, gained valuable experience of rubrics in their years as Summer School faculty at Project Zero, part of their work on UCC's Multiple Intelligences Curriculum and Assessment Project, explored in Chapter 7 above (Hyland & McCarthy, 2009). Over the years, McCarthy and Ridgway devised rubrics and guidelines for every assignment on the three-year accredited programme, from Certificate to Master's level. Thus, faculty taking the postgraduate Diploma in the second year are presented with a rubric providing key criteria for the successful completion of their course portfolio assignment, along with four gradations of quality (for example: 'Well Achieved', 'Achieved', 'Nearly There!' and 'Not Achieved') which scaffold the research project for them throughout the second semester

of the programme. (The Rubric Feedback Sheet is presented in Appendix 1). The rubric still stands the test of time in what is now an online programme and is used by faculty, by their critical friends and by the teaching fellows facilitating their learning, to document, critique, assess and advance learning.

The following example from the *Design* section gives an idea of the scope and instructional nature of the rubric:

### **Entry 1. *Design***

The criteria ask faculty, as students of the programme, to focus on the course context and its history and to use Teaching for Understanding (Wiske, 1998), and Universal Design for Learning (Meyer & Rose, 2000) approaches to revisit their chosen course, in Weeks 1-4 of the programme. These pedagogical approaches have already been explored in Chapter 7 of this publication. Faculty are then asked to share their draft entry with a critical friend to get feedback, and then to post the final draft of the entry to their tutor via the VLE.

The gradations of quality then spell out the instructional detail along a continuum on which students must self-assess and place themselves, before submitting each portfolio entry. All gradations are written in the first person to encourage staff/faculty to identify as students and to take responsibility for their learning. For example, the following direction is given in the 'Well Achieved' category of the *Design* Entry:

I have contextualised the course and focused on its history and design. I have critiqued the course in the light of TfU & UDL and included a Graphic Organiser/Map of my Design. My evidence has been discussed and embedded in my Entry. I have contributed meaningfully and critically to Discussion 1 to build this Entry. (McCarthy & Ridgway, 2016)

A good example of the rubric in action is given by Dr Mohammed Abdulla, Physiology, UCC in the following graphic of his Design entry:

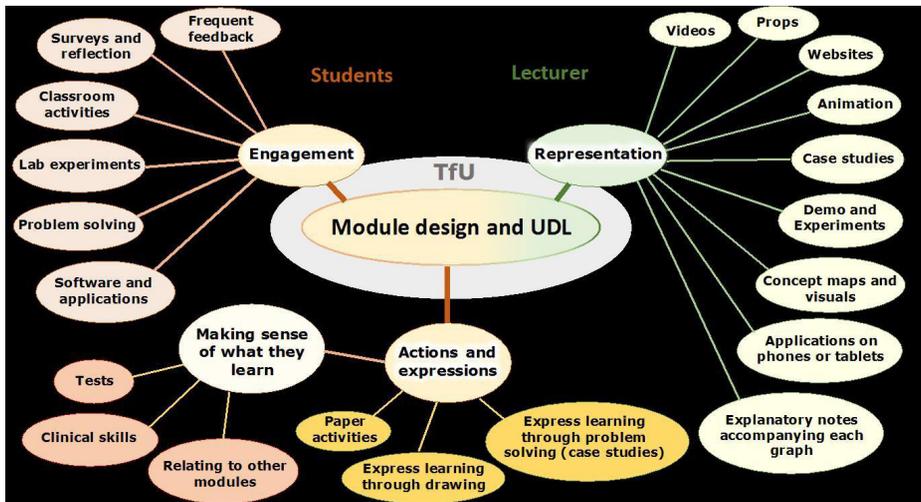


FIGURE 1: UDL organiser for his *Design* Entry by Dr Mohammed Abdullah, Dept of Physiology, UCC.

Dr Abdullah draws on the two pillars of TfU and UDL to critique and redesign his course to maximise learning. He relies particularly on the three principles of UDL: Multiple means of *Engagement*, of *Representation* and of *Action and Expression*, to prompt his design and to make the tools, artifacts, and skills of learning visible through his multi-layered concept map. A full exploration of Dr Abdullah’s portfolio can be accessed in the forthcoming Proceedings of the 3rd Pan Canadian UDL Conference held at Royal Roads University, British Columbia in 2019 (McCarthy & Butler, 2021). Another course portfolio by Dr Kevin Murphy, School of Pharmacy, UCC, can be explored in “Transforming teaching and learning in HEIs: Impacts of UDL on professional development of university lecturers” (McCarthy & Butler, 2019, pp. 203-217).

In contrast, the following is the direction given under the ‘Nearly There!’ category of the *Design* entry:

I have contextualised the course and focused on its history and design. I have not sufficiently used TfU and/or UDL as a critical lens to review this course.

I have not used my evidence well to support my claims. I need to contribute to the Discussion on TfU/UDL aspects. (McCarthy & Ridgway, 2016)

It is important to note that most staff succeed in completing and achieving the course portfolio in the 'Well Achieved' or 'Achieved' category. However, there is much learning for faculty in an instructional rubric, since it names the parts of what might be missing from the portfolio and gives the teacher the opportunity to revisit the work and re-present it in the light of the formative feedback given and in the spirit of an investigative journey.

The critical friend aspect of the process is also key to learning and development. A critical friend is defined as:

...a trusted person who asks provocative questions, provides data to be examined through another lens, and offers critiques of a person's work as a friend. A critical friend takes the time to fully understand the context of the work presented and the outcomes that the person or group is working toward. The friend is an advocate for the success of that work. (Costa & Kallick, 1993, pp. 49-51)

Faculty choose their critical friend from their online Discussion Group, where possible. They are obliged to share each entry of the portfolio with the critical friend before submitting it to their tutor. They are also required to reflect on the critical friend's ideas and advice in the final reflection of the portfolio, which is characterised as follows:

I have reflected in depth on what I have learned about teaching/ student learning using the TfU/UDL approach. I have drawn the evidence together coherently and seamlessly, considered the feedback of my critical friend and have highlighted the implications for future practice and research. (McCarthy & Ridgway, 2016)

The course portfolio method has had a profound impact on developing an investigative stance in teaching and learning at UCC and paved the way

for diverse research projects at Master's degree level, as indicated earlier, and research projects and collaborations that foreground student learning, in the fields of diversity and inclusion, for example, as instanced above.

### **3. Conclusion**

A key finding of this chapter is that the challenge of developing SoTL in higher education is well met by the portfolio model, which is at once a method of documentation and of inquiry; hence a flexible and refined research instrument designed to harness and advance learning, making it visible and accountable. In answer to the questions posed in the abstract, the course portfolio, for example, allows staff to go deeply into one course, and gives them the time and space to redefine and redesign it for the benefit of student learning, of programme development, and of personal and professional development. It is a sustainable method of research that can align with the daily classroom work and teaching load, since all faculty work at the level of teaching a course and can harness opportunities for discussion with students and for peer review and critique with colleagues. Its ultimate advantage over other portfolio methods is that it prioritises and advances student learning, providing a systematic way of critiquing practice from the perspective of learning.

Finally, in answering the questions posed at the beginning of this chapter, teaching and course portfolio models provide ways of bridging the gap between teaching and research and are tried and tested ways of overcoming the 'tired old teaching versus research' debate (Boyer, 1990). The portfolio model draws attention to the dual identities of faculty as teachers and researchers and invites them to honour both in undertaking the call to research their teaching in its everyday guise and complexity. The findings of this chapter speak ultimately to the importance of a developmental, investigative form of professional development which will serve faculty well and confirm them in their identities as teachers and researchers. A robust professional development model does not ask faculty to choose between teaching and research but integrates both and

encourages faculty to go forward with confidence and make their teaching public, as well as their disciplinary research.

In the end of all, it is important to remember that teaching and learning are inextricably linked and belong to all in the academy (hence, the significance of UCC's motto "Where Finbarr taught, Let Munster Learn", already discussed in Chapter 7). To advance teaching and learning is also to advance research in the disciplines and to light the spark of discovery in the generations of learners to come. However, we need ways of revisiting and building on that research and ways of harnessing and critiquing the live act of teaching, including its vision and design. Hence, the importance of the portfolio model and the call to research-informed teaching and new pathways to learning for staff/faculty and students.

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# Appendix 1



Centre for the Integration of Research, Teaching and Learning  
PGDTLHE Course Portfolio Feedback Sheet.

Postgraduate Diploma in Teaching and Learning in Higher Education

Module TL 6006.

Name: \_\_\_\_\_ Department:: \_\_\_\_\_

Critical Friend:: \_\_\_\_\_ Department:: \_\_\_\_\_

Criteria	Well Achieved	Achieved	Nearly There!	Not Achieved
<p>Introduction to my Course Portfolio:</p> <p><b>Rationale and Research focus.</b></p> <p><b>Weeks 1-2</b></p>	<p>I have provided a detailed rationale for examining this module. I have a clear research focus and can critique aspects of my chosen course/module.</p> <p>I have contributed to Discussion 1 to explore and critique my thinking.</p>	<p>I have provided a context, and identified a research focus and rationale for examining this module/course.</p> <p>I have contributed to Discussion 1 to making my thinking explicit.</p>	<p>I may not have considered all elements of this Introduction.</p> <p>I need to engage more with Discussion 1.</p>	<p>I have not addressed the elements of this introduction in any meaningful way.</p> <p>I have not contributed to the Discussion Forum.</p>
<p><b>Entry 1. Design:</b></p> <p><b>Course Context and History. TfU and UDL Design</b></p> <p><b>Weeks 1-4</b></p> <p><b>Share draft entry with critical friend.</b></p> <p><b>Post draft Entry 1 to tutor via Blackboard by ...</b></p>	<p>I have contextualised the course and focused on its history and design. I have critiqued the course in the light of TfU &amp; UDL and included a Graphic Organiser/Map of my Design. My evidence has been discussed and embedded in my entry.</p> <p>I have contributed meaningfully and critically to Discussion 1 to build this Entry.</p>	<p>I have contextualised the course and focused on its history and design. I have reviewed the course in the light of TfU &amp; UDL and included an Organiser/Map of my Design. I have supported my claims with appropriate evidence.</p> <p>I have contributed regularly to Discussion 1 to build this entry.</p>	<p>I have contextualised the course and focused on its history and design. I have not sufficiently used TfU and/or UDL as a critical lens to review this course. I have not used my evidence well to support my claims.</p> <p>I need to contribute to the Discussion on TfU/UDL aspects.</p>	<p>I have not engaged with TfU/UDL to critique this course. The evidence is patchy and unfiltered.</p> <p>I have not engaged with Discussion 1.</p>

Criteria	Well Achieved	Achieved	Nearly There!	Not Achieved
<p><b>Entry 2: Enactment/ Teaching</b></p> <p>Create and Critique a Performance of Understanding</p> <p><b>Weeks 5-7</b></p> <p><b>Share draft Entry 2 with critical friend.</b></p> <p><b>Post draft Entry to tutor via Blackboard by ...</b></p>	<p>I have focused on a session(s) in which I involve the students in a key Performance of Understanding. I have analysed and critiqued the strategy utilised to involve the students in the light of TfU/UDL. My evidence is coherent and embedded in TfU/UDL.</p> <p>I have contributed meaningfully and critically to Discussion 2 to build this Entry.</p>	<p>I have focused on a session(s) in which I involve the students in a key Performance of Understanding. I have analysed the strategy utilised to involve the students in the light of TfU/UDL. I have provided and analysed appropriate evidence.</p> <p>I have contributed meaningfully to Discussion 2 to build this Entry.</p>	<p>My session is built around a series of activities rather than Performances. It focuses on what I am doing rather than what the students are doing. I have not analysed the strategy with student learning in mind. I must provide appropriate evidence.</p> <p>I need to engage more with Discussion 2 regarding performances of understanding.</p>	<p>My teaching is not focused on student learning nor on TfU/UDL principles.</p> <p>I have not engaged in Discussion 2.</p>
<p><b>Entry 3. Reviewing the Evidence of Student Learning</b></p> <p><b>Weeks 8-10</b></p> <p><b>Share draft Entry 3 with Critical Friend.</b></p> <p><b>Post draft Entry 3 to tutor via Blackboard by ...</b></p>	<p>I have critiqued what students learned during the session chosen and analysed the formative, on-going assessment methods, utilising a TfU/UDL approach. I have embedded the evidence of the student voice in my teaching.</p> <p>I have contributed meaningfully and critically to Discussion 3 to build this Entry.</p>	<p>I have focused on what students learned during the session chosen and discussed the formative, on-going assessment methods, utilising a TfU/UDL approach. I have analysed the evidence of the student voice in my teaching.</p> <p>I have contributed meaningfully to Discussion 3 to build this Entry.</p>	<p>I need more emphasis on student learning in the light of TfU/UDL perspectives. I need to work more on developing formative assessment approaches. I must work on providing evidence of the student voice in my teaching.</p> <p>I must engage more with Discussion 3 regarding student learning.</p>	<p>Student learning is not at the heart of this entry.</p> <p>I have not engaged in Discussion 3.</p>

Criteria	Well Achieved	Achieved	Nearly There!	Not Achieved
<b>Conclusion And Reflection</b>  <b>Submit completed portfolio to tutor via Blackboard by ...</b>	I have reflected in depth on what I have learned about teaching/ student learning using the TfU/ UDL approach. I have drawn the evidence together coherently and seamlessly and I have highlighted the implications for future practice and research.	I have reflected on what I have learned about teaching/ student learning using the TfU/ UDL approach. I have drawn on all the strands of evidence from this portfolio. I have considered possible improvements to my teaching and implications for future inquiry.	I have not reflected sufficiently on what I have learned about teaching/ student learning from using the TfU/ UDL approach throughout this portfolio process. I must identify improvements to my teaching and implications for inquiry.	I have not reflected on my learning nor drawn together any strands of evidence from this portfolio.

I have conducted a Self-Assessment of my work, highlighted the appropriate categories of the Rubric and attached a copy of same

I have also conducted a peer review analysis of each entry with my critical friend

I have proof-read my work I have included a Bibliography

Well Achieved  Achieved  Nearly There!  Not Achieved

First Reader \_\_\_\_\_ Date: \_\_\_\_\_

**Guidelines for presentation of your Portfolio**

You must submit your completed **Course Portfolio** by....

**Please check that you have included the following:**

**Cover page** with your Name, Student number, Department/School/Module No.

**Table of Contents**, including a list of Artefacts and Appendices where appropriate

**Bibliography in the style of the Harvard Method**

**Please use Verdana font 12 and 1.5 spacing,**

**Portfolio word count (12,000- 13,500 words). Please include a word count at the end of each entry and an overall word count at the end of the portfolio (excluding artefacts/ appendices/ Bibliography).**

(Página deixada propositadamente em branco)

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## **TEACHING, RESEARCH, AND PUBLICATION: THE CHALLENGES OF ACADEMIC WORK**

**ABSTRACT:** Universities, much like all of Higher Education, have undergone significant transformations, mainly related to a neoliberal logic and to its effects. New challenges are imposed on institutions taking into account the market's trends and needs. Universities are now concerned with economics and efficiency, in a context of academic capitalism. These new outlines of Higher Education imply changes in the daily work of Higher Education Institutions (HEI). The new competences, new focuses of concern and new activities required of teachers, combined with the intensification of teaching work, change how teachers live each dimension of their work, namely teaching, research, knowledge transfer and academic management. These new dynamics also change how an articulation between these dimensions is promoted. This chapter aims to discuss the current relationship between teaching and research based on the results of a multi-case study with teachers of the Education Sciences course in a public university in Portugal and teachers from the Pedagogy course at a public university in Brazil. Using a biographical approach, the study analyses narratives of university teachers and the meanings they attribute to their academic work. In this chapter the relation between teaching and research is discussed, which, by necessity, leads to a discussion regarding publication as one of the professional activities of a university teacher.

Keywords: Teaching, Research, Academic Identity

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## 1. Introduction

This study acknowledges that educational policies are not just another battle of ideas in the field of education, but part of a financial game and often influenced by the logic of profit (Ball, 2012). The model of knowledge production is increasingly centred on a logic of efficiency, effectiveness, and economy, in which the applicability of knowledge and its usefulness are overly considered (Gibbons et al., 1997). A market and competitiveness logic based on neoliberalism is, thus, instituted in Higher Education, bringing an economic perspective into the academic world (Deem & Brehony, 2007); universities are expected to be managed as companies for their productivity and competitiveness to increase; the academics' work is directed in a way that leads them to participate in this competitive effort (Rogler, 2019).

In the society of knowledge, universities have been called on to respond to new challenges and greater demands related, for the most part, to a market logic (Magalhães, 2011) imposed by globalization (Dale & Robertson, 2009). Consequently, most universities are, in terms of objectives and practices, closing in on so-called academic capitalism (Slaughter & Rhoades, 2004; Delgado, 2007; Paraskeva, 2009), which, in turn, accentuates a utilitarian and vocational perspective (Wheelahan, 2014).

Among the reconfigured dimensions of academic work, we highlight a certain intensification of academic work and its unfolding since external changes also modify university teachers' daily lives and activities. The market as a regulator of education and the massification of Higher Education can, for example, relegate the role of university teacher to pure transmission of knowledge, and regard the student as a consumer and knowledge as a product. The exhaustive work hours, the recurrence of tasks and activities of a teaching and administrative nature, the accumulation of responsibilities, and the obligation to be involved in publishing and internationalization are examples of requirements that are currently part of a university teacher's role.

The new competences, new focuses of concern and new activities required of university teachers, combined with the intensification of

teaching work, imply transformations in how teachers live each dimension of academic work – namely teaching, research, knowledge transfer and academic management – and in how they promote articulation between them (Griffioen, 2020).

This chapter aims to discuss the current relation that academics establish between teaching and research based on the results of a multi-case study with university teachers from the Education Sciences course of a public university in Portugal and university teachers from the Pedagogy course of a public university in Brazil.

## **2. Methodological notes: university teacher narratives**

The narrative approach was used because we consider it to be the most appropriate methodology to understand the subjective process underlying the reconfiguration of academic work in this new context. In fact, we value the subjectivity of the participant when telling us his/her experience and acknowledge the centrality of the experience as a source of knowledge. Narratives are sensitive to context and assert themselves as places of subjectivity, action and interaction that grant access to the actors' world (Lopes, 2011; Lopes et al., 2013).

Biographical interviews were conducted to access the participants' points of view, considering the scenario and the time in which they are historically inserted. The focus is the university teachers, their experiences as interpreted by them (Bolívar, 2006), invoking places, practices, and meanings of their practices (Lopes et al., 2013; Pereira, 2010). The production of the narrative is, at the same time, a dialogue with oneself and with others (Rivas et al., 2013).

Multi-case studies allow the results to reveal the complexity of the phenomena (Amado & Freire, 2013) under study, namely making it possible to identify the levels and focuses of analysis to be privileged.

The two institutions participating in this research are part of the public sector, are considered universities of excellent academic quality, and are in cities of great economic and cultural importance for their countries.

The Brazilian university participating in the study employs 93 teachers, 30 men and 63 women. We interviewed 13, 3 men and 10 women. The Portuguese university employs 28 teachers, 8 men and 20 women. 5 men and 5 women were interviewed. 13 biographical interviews were conducted with Brazilian teachers overall, and 10 with Portuguese teachers. The 23 semi-structured interviews were transcribed verbatim and were followed by the writing of a biographical narrative by each teacher. The transcription of the interviews was submitted to thematic analysis.

The thematic analysis took into consideration pre-established categories and emerging dimensions that raised during the reading and interpretation of the interviews. The categories were not exclusive, and one passage could be placed in different categories, in case of being meaningful to more than one. As general categories, we mention: family, schooling, professional experience, relationship with knowledge, with peers, with the social context, the intensification of work, evaluation, publication, resistance, critics to university and dimensions of academic work (research, teaching, knowledge exchange and university management). After careful reading of the material and categorization of each dimension, the analysis of the teachers' narratives was made. It allowed for several aspects that contribute to the construction of academic professional identity and that are part of the work to be discussed. In this chapter, the relations between the dimensions of academic work are discussed, specifically the articulation between teaching and research.

Regarding the teachers' relation and experience with the different dimensions of their work, it is possible to summarize that academic management is reported to be standing between the possibility of democracy and the excess of administrative and bureaucratic tasks (Santos et al., 2018; Evans, 2015). Teachers who take on management positions complain about a lack of support and appreciation on the part of the institution, the lack of participation by all involved and the work overload resulting from administrative tasks. Knowledge transfer, thus, asserts itself as the possibility to bring the university closer to the professional field.

However, the dimensions most highlighted by teachers are others: teaching and research. There is an insistent search for the articulation of

teaching and research, but a dichotomy between these two dimensions of academic work, which we will discuss below, remains. It is important to state that, currently, discussing research necessarily involves discussing its publication. Thus, much of the discussion regarding the dichotomy between teaching and research implies discussing academic publishing and how it shapes university teachers work.

### **3. Teaching and Research**

Research and teaching are the dimensions of academic work that attract the teachers who participated in the study the most. More than just teaching or research, teachers value the articulation between these two dimensions. Boyer (1990) defended an academic activity beyond the teaching versus research debate, in order to value intellectual work as discovery, integration, application and teaching. Several systems of analysis and authors (Healey, 2005; Griffioen, 2020) refer to this articulation, but the current context tends to intensify opinions in favour of a dichotomy between teaching and research.

Some participating teachers argue that teaching is the main dimension of their profession, occupying a higher place than research – research improves and complements teaching, but, according to some teachers of both contexts, research is not a condition to teach. Although they consider research to be fundamental and relevant to the development of excellent teaching work, some teachers consider that the role of the university consists in teaching.

Other teachers clarify their passion and preference for research. The possibility of developing quality research intertwined with teaching is one of the main differences between teachers in public universities and teachers in other institutions, such as private colleges and universities and between university teachers and teachers in schools where a research component is not part of the job.

In this study, we found that the possibility of expanding knowledge and developing research in parallel with teaching activities was one of

the main motivations for participants to enter the academic profession. Research being the differential factor of the university teacher (from public universities) makes most teachers highlight this dimension as fundamental to their work, a dimension to which they dedicate (or want to dedicate) more time and effort:

Not being able to research as much as I would like makes me suffer a little. I do some research, but if there were two careers, the teaching career and the research career, I might choose to invest on the research career. (...) There is no dispassionate research and I think this sentence for me is it: it was really passion, this is what I really like and, therefore, I will invest on it. (Luciana, PT)

The teachers participating in the study had research experiences at different times, some had contact with research earlier than others depending on the training period and on the institution they attended. For two of the Portuguese teachers, research was their only professional activity before teaching in the university. The first contact with research took place, in most cases, during advanced training (master's or Ph.D).

The academics participating in the study expressed the desire to involve students in research as early as possible, even during their bachelor's degree. Their aspiration is to include students in projects and develop their research competences earlier and earlier.

The articulation between teaching and research can be done in different ways (cf. Healey, 2005), namely through research methods, through the practice itself, through teaching the contents that are researched and through sharing the results with students. Teaching can make it possible to expand areas of knowledge and assist research (Leite & Ramos, 2008). The relation between these two dimensions could promote higher quality training in Higher Education. Visser-Wijnveen et al. (2010) highlight five activities that enable influence and multiple improvements between teaching and research: teaching research results; divulging research; showing what it means to be a researcher; supervising research projects and offering research experiences to students.

It is possible to find, through the analysis of the narratives, different benefits of articulating teaching and research, in a relationship where both dimensions improve: a) the integration of students in research projects also promotes the training of researchers and of research competences; b) supervision is an opportunity to train researchers; c) teaching and researching within the same theme is a way of aligning the two dimensions, increasing depth and quality. For example:

Teaching action does not live only from the wealth of pedagogy; [...] The teacher has to master the subject area he/she teaches [...] the research conducted in my master's, in my Ph.D, in projects in which I have been involved, has been fundamental to me and to improve the quality of my work as a teacher. (Gabriela, PT)

[...] this bachelor's degree is [currently] much better, it is very different, with a different kind of teacher, a teacher who, in general, is inserted in the research either because he has a master's degree, a Ph.D or because he/she himself/herself is a researcher. (Inês, BR)

A transformation in the university teachers' relationship with research over time was also observed in the narratives. The Brazilian teachers point to an increase in quality and to better conditions for research to be carried out and to integrate students in their projects, made possible by initiative grants from the institution and external agencies and by study groups established at the university. In the Portuguese case, the emphasis is centred on more negative aspects, such as the distance between research themes and the possibilities of action in society, and (funded) projects with a lot of tasks and shorter durations that compete with other activities that university teachers have.

Researching represents the possibility of knowing the reality, the effects of policies and reforms, appreciating a situation, having a better understanding of how to intervene in a more appropriate way. Research is often approached by participants from both contexts in a way that can improve life in the community, through intervention projects and other

activities. Thus, research relates to knowledge transfer, to work among peers and to the educational relationship, containing multiple articulated dimensions of academic work. The teachers involved in the study seek to strengthen this relationship between teaching and research to improve the quality of their work. Some do not agree with the pace imposed on certain research activities, such as the need to publish articles and to participate in scientific meetings, something required by evaluation systems and funding agencies. Teachers indicate that, more than research, the need to publish often monopolizes their working time, to the detriment of their teaching time.

### **3.1. Research, publication and teaching**

The pressure to publish is part of all university teachers' everyday life. In some more positive narratives about the transformations of the work, publishing emerges as a consequence of research and as a possibility to disseminate the work that is done within the university, being a way to expand its contribution. It is seen as part of the work and, therefore, as a dimension of interest to teachers. In more tired narratives about the transformations of the teaching work, it appears as an aspect that can corrupt the purposes and the quality of research processes, becoming an end and no longer a part of the process.

The emphasis placed on research and publication by teacher evaluation is responsible for the highlighting of research in university teaching since the visible products evaluated are related to research practices and results. Regarding that subject, here are some tendencies of the academic profession observed in the research study: the emphasis on research; the demand for immediate and short-term responses; the pressure to publish, which is felt in different ways by the participants; and the control of evaluation, intensifying the feelings of “publishing or perishing” and the need to “become visible or disappear”.

Publishing in a foreign language, namely the English language, was discussed by the academics. There is a difference in perspectives regarding

the impact and social relevance of research when published in a foreign language. In a more enthusiastic narrative, publishing in a foreign language is seen as a possibility to expand networks and to disseminate research results and data on the national reality to other countries and researchers from around the world. In a more pessimistic one, publishing in a foreign language is seen as submission to a supposed supremacy of the English language; instead of serving the purpose of extending outreach to an international audience, it restricts the public and alienates readers from people who they could truly benefit from or whose research results could interest them.

The weight given to publication in selection processes, competitions for project financing and evaluations for career progression is subject to criticism, as it reduces the importance of other aspects from the university teacher's work, such as teaching, the educational relationship and, inclusively, of other elements within research.

In a neoliberal perspective, self-regulation is replaced by accountability, by the presence of standards and external evaluations, engulfed in a discourse about indicators, goals and results. Performance is valued, in the sense that results may be more important than academic processes and values. There is a threat of instrumental and economic values standing out over educational values, when defining the professional identity and professionalism of Higher Education teachers (Harris, 2005).

Evaluation and publication are intrinsically connected in Higher Education; not only to the evaluation of the teacher, but also to the evaluation of research centres, post-graduate programmes, courses, faculties and universities. Being directly related to the evaluation, publication, consequently, conditions the funding of research. The university's external evaluation focuses on an explicit and transparent performance, which requires a "visualization of the work" of the teacher (Bleikle et al., 2000). Funding rules, in turn, condition the research and dictate what is plausible and possible to research. Thus, what is or is not "researchable" can be conditioned by funding agencies and by their interests.

The participants' narratives highlight the need to publish to apply for funding. To obtain funding, it is necessary to "play the game" in a cycle

that involves publishing to get a good evaluation and financing projects that allow research to be developed with a greater number of publications so that a good evaluation in the next application can be guaranteed. The publishing logic strengthens, as it is the fuel to obtain funding and to continue the cycle that places it at the centre of research.

University teacher evaluation says a great deal about what a teacher's daily life is, and determines what is valued professionally. Many teachers may only be concerned with the more "visible" aspects in the assessment, namely the number of items in the curriculum, as the literature denounces (cf. Candau, 2010; Waters, 2006).

In the social sciences, funding agencies increased the pressure for collective research, for the creation of networks. But the incentive for collective work and networking does not mean an increase in solidarity and community spirit. Evaluations encourage more publications, the participation in more conferences, dialogue, collaboration, but also rivalry within the same scientific area (Henkel, 2002).

Some of the Brazilian participants have a more positive look on publication, stating that they do not consider the requirement to publish to be too much, arguing that it is a consequence of the research work that the teacher is able to develop.

On the opposite side, other participants' criticism of publication involves the fear that this system will reduce the quality of publications and develop a logic of short-termism in research so that more articles are published in less time. For some teachers, this logic of intensifying publication can corrupt academic autonomy and freedom, conditioning teachers to publish articles in certain journals. The teachers' reports are in line with the literature on academic capitalism (Slaughter & Rhoades, 2004), which institutionalizes the quantitative nature of publications as an objective of science, supporting a logic of performance in the university space and consequently eroding academic autonomy and freedom (Hyde et al., 2013).

Some teachers assume that they choose to dedicate themselves to aspects they consider more important to their profession, unworried about their evaluation. Some teachers, for example, present a certain resistance to

this pressure to publish by not participating in this dynamic, since they do not identify with this system.

I don't take part in carnivals. I don't like it, I never really liked the carnival all that much (laughter) and therefore, I will not turn my life into a carnival. Unless I'm forced to do it. If I am forced to do it and I have no other choice I'll do it, but I'll resist, I'll resist. (Joaquim, PT).

Even if they are not clearly opposed to this publication system and accept to participate in it, some university teachers indicate the lack of time as an obstacle, given the intensification of the work. Others, when reflecting on the current dynamics of publishing in the academic profession, question its relevance, and end up not investing in it.

Writing articles for journals doesn't matter, I don't care, I write some, but I'm not concerned with that, I'm more concerned with writing stronger things, with more depth, more thought and that can't be written in 20 pages and that's that. (André, PT)

I want it to be, in fact, a publication, more than a commercial edition, what I want is for it to go on circulation and reach the public schools, for teachers to be able to, in fact, use it as a guide, to use the material with the students, right? So, it's a project that I intend to make possible, but not in a commercial edition format. It is, perhaps, a partnership with a university, something that I will still put into practice. (Carla, BR)

The participation in scientific events can also be discussed under the same critical rationale that applies to publishing. Scientific events are related to research, through the dissemination, discussion and debate of results, and are linked to knowledge transfer, since it is through dissemination that other people gain access to this knowledge. However, the audience for a scientific event is still limited to the academic world. The expansion of result dissemination does not reach the community.

Thus, knowledge transfer through scientific events is not achieved and the need to rethink ways to communicate science emerges.

An imbalance was also found between the time dedicated to teaching and research activities, including the time for research dissemination. The educational relationship is, within teaching, one of the aspects that the participants most value. The lack of time due to the accumulation of tasks and to the pressure of the system means that the time spent with teaching is much less than desired and contact with students reduced. Some changes, such as the Bologna Process in the European case, interfere directly in the quality of teacher-student relationships, with a lower number of hours being given to each subject and, considering the autonomous work component of curricular units, with the amount of contact that teachers have with students being reduced. Therefore, the relationship with students may cool off and creating an affective bond that reveals the ethical and political dimensions of the teaching practice may prove harder.

At the same time, traditional classes face some challenges when within a context where knowledge is passed on in more dynamic ways. Higher Education makes some demands of students, such as organization of knowledge and dedication to autonomous study. Students, in a more dynamic scenario, also make demands, such as, for example, requiring an almost instant response from teachers via e-mail or new forms of technology.

Thus, they may come to demand new ways of teaching that go beyond the traditional expository class, offering new forms of teaching and learning in Higher Education, namely teaching linked to research work. However, the larger number of students, a result of the massification of Higher Education, can place more distance between teachers and students, hindering the relationship between teaching and research and denying the interrelation between teaching and learning (Brew, 2010). At the same time, Higher Education needs to prepare students to solve problems that have not yet been found (ibidem). It must prepare students for new requirements linked to an open and creative attitude towards new forms of knowledge in the complex and challenging professional world they will face.

The importance of research and its impact on the teaching quality are unquestionable. Research can, for example, bring teachers and students closer together, clarify new challenges and methods, promote a better understanding, and practice of teaching work and help to overcome its challenges. However, the data showed that the articulation between teaching and research is not achieved in the way university teachers desire it to be, due to, once again, the intensification of academic work and competition between different activities.

#### **4. Dichotomies and expectations: conclusions to foment dialogue**

The narratives make clear that despite the dichotomy between teaching and research, a balance is sought. However, the scales lean towards research since it is, on the one hand, the main motivation for many to pursue academic careers and on the other, the place where greater recognition and institutional value can be found. Thus, the relationship between teaching and research is shown to be complex and problematic. As a result, the pedagogical challenges may be greater, due to the teachers' lack of time and to the lack of institutional recognition.

The expectation most university teachers have to integrate teaching and research does not translate into practices and strategies, which often means that this articulation is not achieved. Hyde et al. (2013) talk about the impact of managerialism on the nature of teaching and research and list changes in the control of academic work, such as the loss of academic power.

On the one hand, the logic of academic performance can bring about several negative consequences for teaching, as well as for science itself. Negative consequences regarding teachers, the publication process and knowledge production can all be found. Teachers, on their part, can become increasingly stressed and exhausted professionals, damaging physical and mental health, facing issues relative to privacy and to increasingly blurred lines dividing personal and professional life.

Teachers' desired identities and their actual ones do not match. This distance between what is possible to achieve and what the teacher idealizes for his/her profession promotes a feeling of unfulfillment and of lack of self-worth (Lopes, 2001). To this, another dichotomy is added: what you should do and what you can do. The teacher's identity is, in fact, unbalanced between what teachers want to be and should do and what is possible to actually do, in this scenario of transformations.

The results of this study are on par with others regarding the intensification of academic work, the imbalance between professional and personal life, and chronic fatigue (cf. Boyd & Smith, 2014; Guzmán-Valenzuela & Barnett, 2013).

The current conditions of academic work can intensify the dichotomy between teaching and research, going against the expectation to articulate these activities in order to achieve a cohesive professional identity and higher quality work. However, despite these negative aspects, our study also highlights positive characteristics, such as work flexibility, the permanence and persistence of academic values and ideals, the commitment to the scientific area, academic freedom, and the autonomy of the profession (Ylijoki & Ursin, 2013).

McInnis (2012) argues that authority in the scientific field, personal autonomy and freedom are elements of academic identity, regardless of the subject and of the context in which the teacher is inserted. In addition, it is possible to see that the system allows some action, resistance, and self-regulation to take place.

Peseta and Loads (2017) highlight two paths for academic identities: the first is the disaggregation of academic work as a global problem, which leads to fragmentation and anxiety; the second path is the search for the articulation between teaching and research, in a cohesive and coherent whole. The first path has permeated teachers' narratives, as was also evidenced in this study. It is up to research projects, communities of practice and to all involved in academic activity to discuss possibilities for more articulate and solid work. We highlight, in this study, the need to build a space for sharing and debate among peers, in the academy, and how important it is for the university to research itself, to give merit

to positive practices and reconstruct what goes against its principles and values.

The current challenge involves combining research work with political courage, stressing that the measure of an intellectual project must be the curiosity of a critical and independent mind (Amit, 2000). Barnett (2018) argues that realism is not enough, deeming it necessary to be idealistic and imaginative to bring creative solutions to the university – using creativity to build democratic spaces for dialogue and joint work.

Researching modes of operation and experiences within the university can allow the creation of new times and spaces for the development of group spirit and of a feeling of belonging and to develop other aspects of the profession. Understanding the reality allows one to improve teachers' work conditions and, consequently, the university's vitality and quality. Although investigating these processes alone is not enough, knowing how some control mechanisms work and how one is positioned in relation to them allows one to develop resistance strategies.

Collective reflection can bring about questions and answers, challenges, and solutions to the profession. We highlight the need to create a path starting by the experiences of the actors themselves, by sharing different cases by working with peers, in order to move from denouncement to the announcement of new, more cohesive ways, for the university to work for, and be involved in, society.

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**AWARENESS AND DESIRE AS STRATEGY  
FOR CHANGE. THE INTEGRATION OF RESEARCH  
AND EDUCATION AT AMSTERDAM UNIVERSITY  
OF APPLIED SCIENCES**

**ABSTRACT:** Dutch universities of applied sciences (UASs) had been teaching-only institutes since their legal origin in 1960. The development of higher education (HE) in Europe in the past twenty years requires UASs to embody and become hybrid organisations where education and research are integrated. Ever-changing, complex society needs professionals with overarching skills, such as critical, analytical and reflective ones. The Dutch government has framed this as a generic need for research abilities in all higher education students, in addition to framing research as a pedagogy for the development of skills. The new millennium brought Dutch UASs national funding for research and the appointment of *lectoren* (research professors).

In 2015, the Amsterdam University of Applied Sciences (AUAS) board substantiated this national incentive in a renewed university-wide strategy to integrate research in all educational programmes. The AUAS strategic programme 'Research into Education' (Dutch: *Onderzoek in Onderwijs*; OiO) was designed to assist in the implementation of this aim. Educational managers and lecturers were positioned as the central actors in manifesting the intended changes. Five projects were framed, spanning from hands-on, tailor-made assistance of teaching staff to the creation of national and international networks. The aims and mechanisms for change of these projects as well as their results are presented in this chapter.

Although AUAS was successful in realizing a broad desire to integrate education and research, monitoring and evaluation of the process shows how little we collectively know about functional connections between research and education, especially in applied higher education. A future strategic programme needs to bring about professional enhancement at all levels to maintain the already-realised awareness and desire and take the process further to effect ability, knowledge, and reinforcement (Hiatt, 2018). It is a work in progress, yet hands-on university development can become empirically founded practice by smart and precise choices and design.

**Keywords:** Research–teaching nexus, change, higher education, implementation, applied universities, Netherlands

## 1. Changing expectations and mechanisms

This chapter presents and discusses the approach for changing a Dutch teaching-only higher education institute into an institute for research and teaching. Traditionally, higher education in Europe has focused on educating high-class citizens, including in the professional fields of medicine, law, and theology (Grace, 2014; Ruegg, 1992). Nowadays, governments incorporate the high-quality education of professionals into their responsibilities. Higher education institutes have a societal responsibility to provide for knowledgeable professionals, their degrees and their systematised knowledge (Griffioen, 2019b). They educate professionals to work in societies that are constantly changing. The 1999 European Bologna Declaration states that students are expected to be able to function in the current knowledge society (Elen & Verburch, 2008), which demands that higher education institutes instil in students overarching skills, such as critical, analytical, and reflective ones (Barnett, 2000).

This chapter presents the Dutch setting and the plan for, as well as execution and effects of, implementing research into all educational tracks of Amsterdam University of Applied Sciences (AUAS, Dutch: Hogeschool van Amsterdam) between 2015 and 2019. Through this strategy, AUAS is on its way to becoming a full hybrid institution of research and education.

First, paragraph two explains the Dutch setting and describes the run-up to the AUAS strategic programme ‘Research into Education 2015-2020. Paragraph three presents the aims of the strategic programme and

the ADKAR model for change (Hiatt, 2018) that was applied to underpin the change strategy. Paragraph four describes the five projects that were carried out to reach the programme aims and the mechanisms through which they triggered and perpetuated organisation wide change. Paragraph five presents an overview of the results of the monitoring project. The chapter ends with the current state of the integration of research and education at the time of writing in paragraph six, again linked to ADKAR. A work in progress and a vision of the future.

## **2. Setting the scene of Dutch Higher Education**

This paragraph presents the Dutch setting of this chapter in the context of European developments toward hybrid higher education organisations.

### **2.1. Research in Dutch Universities of Applied Sciences**

In 1960, the Dutch government created institutes for higher professional education as part of a large transformation of the secondary education system (Griffioen, 2013; Ministry of Education, 1960). These *hogescholen* became part of the higher education system in 1992, creating a binary structure of traditional universities and UASs (Ministry of Education Culture and Science, 1992). Nowadays, the Dutch higher education system consists of 14 traditional and technical universities and just over 40 UASs (De Boer et al., 2007).

The Dutch governmental direction has been more ‘at a distance’ since the mid-1980s, when neoliberal steering principles, such as quality and accountability, were introduced (Deetman, 1985). Every five years, the Dutch government provides a strategic agenda, upon towards which the higher education institutes direct their strategic ambitions (Griffioen, 2013).

The 1999 Bologna Declaration resulted in a firmer belief in the importance of research as part of the higher education track and for professionally oriented higher education, as happened in many countries in Europe.

While the formal task of doing research to enhance professional practice had been part of the higher education law since 1986 (Kickert, 1986), there were hardly any actual research practices, due partly to a lack of governmental funding (Witte et al., 2008). Therefore, research skills or experience usually constituted no grounds for selection in the application procedures for lecturers (Kyvik & Skodvin, 2003), and teaching skills and professional skills were considered of the highest importance for educating professionals (Boerma et al., 2013; Griffioen & De Jong, 2017). Large groups of lecturers had professional bachelor's degrees as their highest formal qualification (Dutch Ministry of Education Culture and Science, 2011).

Many connect the skills to learning to do research, as does the Dutch government. Increasingly over time, this government has framed research at the core of generic professional skills for higher education students, doing so through two ways: students' need for research abilities, and research as a pedagogy for the attainment of skills. In the 2007 Higher Education Strategic Agenda (p.11), the following was stated:

A solid interaction between educational programmes, research and employers improves educational quality as well as the quality of professional action. Improving this interaction requests of teaching-intensive universities that they involve their students in design and development and other types of applied research.

This line of reasoning showed to be dominant and still exists in the 2019 Amsterdam Higher Education Strategic Agenda (p. 22):

A strength of higher education in the Netherlands is the cohesion between education and research (KNAW, 2019). As a result, students in the Netherlands develop an inquisitive attitude, they learn to think creatively and are stimulated to explore new avenues. Research also improves the content of education because recent insights and innovations are given a place in education.

In 2001, a treaty between the Dutch Minister of Education and UASs provided structural funding for research. More precisely, national fund-

ing was provided to appoint *lectoren* (research professors) in UASs who would explicitly focus on applied research to enhance professional fields (De Weert & Leijnse, 2010). Their expected responsibilities were threefold:

1. To raise the quality of educational programmes through also raising the quality of the teaching staff, which resulted in debates about lecturers' formal qualifications.
2. To add to the theoretical body of knowledge of different professions.
3. To help professional fields innovate.

After eight years of research funding, academic staff in UASs were spending about 8% of their time on average on research activities, where before hardly any research was done. However, in the Dutch UAS setting there is no obligation to combine teaching with research. Despite the increase in research activities, many of these institutions struggle with a lack of an established research culture, and many working there presumed research would fade into the background again after the hype (Huisman, 2008; Van der Linden et al., 2012).

In 2001, Dutch UASs started to implement research activities as an extension of the participation in the Lisbon Treaty and the Dutch national research funding provided (Advisory Council for Science and Technology Policy, 2005; Griffioen & De Jong, 2012). They started to define strategies to implement research in their teaching-only organisations in general and in multiple educational tracks for professional higher education in particular. This activity was part of a Europe-wide parallel development, which can also be found in e.g., the *Fachhochschulen* in Germany, the former Polytechnics in the United Kingdom, and the *Hogescholen* in the Netherlands (Teichler, 2008; Vogel, 2009).

## **2.2. To become a hybrid organisation of two logics**

The new proposed balance was more complex, and yields changes in how students are educated (Griffioen, 2019c), which lecturers are hired (Griffioen, 2018) and how higher education is seen (Barnett, 2012; Grif-

fioen, 2019b). While UASs across Europe showed their own pathways, following from their own interpretations of the Lisbon Treaty (Duivenboden et al., 2009), all needed to transform from teaching-only institutes to hybrids of two primary processes: teaching and research. Hence, a second ‘logic’ (Thornton & Ocasio, 2008) had to be implemented where previously the institutions were based on a single logic of teaching.

International research has shown that the success of hybrid organisations depends on sufficient balance between the different logics present (D’Aunno et al., 1991; Mouwen, 2000; Thornton & Ocasio, 2008), in this case those of research and education. This balance is not easy to achieve. Adding a second organisational logic provides opportunities for employees to choose between the old and the new logic instead of embracing the intended change (Quirke, 2013). Actions of individuals generally depend on stimuli and sanctions of the organisation as a whole (Toubiana & Zietsma, 2017) and often prove very difficult to change due to the implicit transfer of current ways of working to new personnel (Bystydzienski et al., 2016). Therefore, for an institution to become a successful hybrid, changes are needed in both the organisational structure and the culture for actions of individual employees (Bystydzienski et al., 2016). Although some research on hybrid organisations can be found, there is almost no systematic research about the complex change process to become a hybrid organisation (Vermeulen et al., 2016), leaving change managers in the dark about successful approaches.

### **3. A strategy for change at Amsterdam UAS**

This paragraph presents the strategic programme ‘Research into Education’ 2015-2020 (Dutch: *Onderzoek in Onderwijs*; OiO) and the ADKAR model for organisational change (Hiatt, 2018) that underpins the programme’s approach in aiming for an integration of research and education.

### 3.1. Substantiation of European and Dutch policy

Almost 20 years after the Lisbon Treaty and the national incentive for research, AUAS currently employs 70 *lectoren*, which is a lot when one considers the first was only appointed in 2001. That number, however, is very small when one considers AUAS's 45,000 students and 5000 employees, of whom 3500 are on an academic contract, divided across seven faculties.

In 2015, the AUAS board confirmed a new strategic agenda (Hogeschool van Amsterdam, 2015a) with novel strategic research policy (Hogeschool van Amsterdam, 2015b), which provided a renewed university-wide strategic aim to integrate research in all educational programmes.

The combined 2015 strategic policy documents stated,

AUAS educates professionals at bachelor's level and master's level, who are aware of the constantly changing world around them, who are able to keep their professional knowledge at level and to adapt their actions to new knowledge and changed insights. This implies that they make professional decisions for action based on current (international) scientific knowledge and insights.

This requires AUAS educational programs that they infuse their students as future professionals with knowledge, insight, skills and attitudes related to their professional fields, which lead to the appropriate professional behaviour. Knowledge, insight and skills related to research with a professional focus are herewith essential, as well as a functional organizational culture and structure focused on the integration of research and education.

These aims provided a connection between the professional learning of students, the design of educational (bachelor) programmes and the wider organisational structure, which is in line with the notion that connections between research and teaching can only be effective if they are consistently embedded across higher education institutes (Jenkins & Healey, 2005; Jenkins, et al., 2007).

The strategic purpose of these aims was to be specific enough to make educational managers and their teams to think about (further) integration

of research and teaching in their own programmes. At the same time, the aims needed to be generic enough to include all disciplinary sectors, each with its own language and characteristics. The intention was to be as inclusive of disciplines as possible on the rationale for change.

### 3.2. Aiming to create shared ambition

The strategic programme ‘Research into Education’ 2015-2020 (Dutch: *Onderzoek in Onderwijs*; OiO) was designed to assist in the implementation of the aforementioned aims. A programme owner (a faculty dean) and programme leader (senior central policy officer) were assigned. This university-wide role of the dean was innovative for the Dutch setting which does not have roles comparable to pro-vice-chancellor in the UK and contains the responsibility for university for change beyond his own Faculty. Together, programme owner and programme leader formulated more operationalised programme aims (see Box 1), derived from notions of curriculum development and principles of organisational change. The university board approved the full strategic programme.

#### **Box 1. Aims of the strategic programme Research into Education**

- 1 For each educational programme to have a grounded rationale (vision) for research in its related profession and therefore in the programme (ideally before 2017).
- 2 To (re)consider the position of research across curricula (ideally before 2020).
- 3 An increase in the numbers of lecturers and of educational teams active in the strategic programme activities.
- 4 An increase in activity (between lecturers and educational teams) on the topic of research integration.
- 5 That AUAS might have an established vision for research in professions and education, taking disciplinary diversity into account.
- 6 That AUAS might define the characteristics of exciting undergraduate programmes that include research.

The first two aims were formalised to only provide generic direction and to allow space for manoeuvre – and therefore learning and adapting – for educational teams. While it was well known that the broader

organisation around the educational programmes would need to adapt to the requested research integration into educational programmes, the starting point to drive this change was purposefully chosen at the lowest, most practical level of the organisation: in the 70 educational programmes themselves.

### **3.3. Educational teams as core stakeholders**

Educational managers and lecturers were positioned as the central advocates and enablers of change. After the turn of the century and also in AUAS, the newly employed *lectoren* were expected to bring research into the educational programmes (Ministerie van OC&W & HBO-raad, 2001). However, the first ten years of an active policy focus centralized around these individuals showed that they were too few, too fragmented across topics and departments, too often employed part-time and lacked managerial responsibility to have a sufficient impact on education. After 2005, *lectoren* were grouped into knowledge centers, which created more research mass and content focus (Leijnse, 2005). This positively impacted the visibility of research and increased the quality of output as well as opportunities to bid for external research funding. Where the research success increased, it did not, however, change the results of integrating research into educational programmes.

As in most Dutch UASs, in AUAS research activities were mostly organised to be independent of educational activities. The *lectoren* were research specialists but generally did not have line-management responsibility for educational programmes. Their efforts to bring research into these programmes only sometimes resulted in curriculum change and were often stranded due to differences in research or professional experience and to perceptions of how research could benefit professionals, as was also shown in a study across six Dutch UASs (Griffioen & De Jong, 2009). When such differences of opinion (often just lack of mutual understanding) occurred, *lectoren* were not able to push their ideas through because of lacking managerial responsibilities. There is no saying whether their pro-

posals would have been the right ones, but often nothing at all changed, and many well-intended conversations ended in disconnects and mutual disappointment among *lectoren* and lecturers alike.

Based on this experience, the new strategy starting from 2015 followed those with the line-management responsibilities and not those with the highest level of research expertise. Educational managers and their teams were made responsible for implementing research into their educational programmes. Formally, the educational managers had retained this responsibility from the start, but the *lectoren* were made morally responsible as effect of the government policy that underpinned their initial appointment in 2001, leaning on them having the most expertise. Therefore, few educational managers had actively taken on this responsibility. Higher-level management did not always easily embrace the new strategy, considering the lack of research expertise in educational teams and their motivation for the topic as problems (Griffioen & De Jong, 2015, 2017). Still, the AUAS university board approved this strategy.

#### **3.4. Aims to create movement in educational teams**

With the educational managers and their teams as core stakeholders, the most important question was how to get them moving towards change. Their core specialism and motivation were not research-related; they were to educate high-level professionals; their expertise was to provide education. Previous research (Griffioen & De Jong, 2015) that followed Azjen and Fishbein's (2010) Theory of Planned Behavior had shown that lecturers' active involvement in research would increase their self-efficacy as well as their support for research-related ambitions in multiple Dutch UASs. Based on this notion, projects were framed to let lecturers across different faculties share their experiences on research integration. The programme-owning dean would be visibly present at each large-scale activity to affirm the managerial importance of these actions.

The ADKAR model, consisting of awareness, desire, knowledge, ability and reinforcement phases (see also Box 2) for organisational change

(Hiatt, 2018), fit well with these changes and the first two phases were adopted as an underpinning of the overall strategy.

<b>Box 2. ADKAR phases of organisational change (Hiatt, 2018)</b>	
Awareness	Enhancing awareness of organisational strategic ambitions
Desire	Enhancing the desire to contribute to organisational strategic ambitions
Knowledge	Increasing the knowledge required for constructive contributions to the aforementioned ambitions
Ability	Increasing knowledge-based skills and ability to realize contributions
Reinforcement	Embedding the realised changes in organisational prerequisites and quality assurance

Through this lens, the purpose was to get lecturers moving on this topic in any direction related to the broad perspective provided, for which the mediating programme aims 3 and 4 (Box 1) were stated: to increase the numbers of lecturers and of educational teams active in the strategic programme activities and to increase the activity (between lecturers and educational teams) on the topic of research integration.

Finally, the increase of debates on research integration was expected to make the organisation ready for a collectively established vision at the university level, as well as for collective characteristics of research integration in applied undergraduate programmes at AUAS within the 5-year term of the strategic programme. Thus, aims 5 and 6 (Box 1) were formulated on establishing a vision for research in professions and education, taking disciplinary diversity into account and on defining characteristics of exciting undergraduate programmes that include research.

#### **4. Aligned activities across the university**

This paragraph describes the five projects, and their mechanisms, that were designed to reach the six programme aims in terms of awareness and desire (Box 1 and 2).

#### 4.1. Five projects shape the change programme

While the formulated aims provided direction, the strategic programme additionally needed a hands-on strategy for development and interaction. Initially, the project team formulated four projects that would enforce each other's effects in the university (see also figure 1). The set-up of the projects needed to consider the large size of our university as well as the dynamics of colleagues in different stages of activity and development. After the programme ran for two years, a fifth project was added. Hereafter, the projects will be briefly described.

##### **Project 1**

An **online tool** was developed to showcase the diverse perspectives of research integration related to the Dutch setting. Additionally, this tool provided full documents for further reading about the different perspectives on research integration and the possibility for Q&A across the university between lecturers of similar and different educational teams.

##### **Project 2**

Educational teams were given **hands-on support** from the project team with their own local research integration at module and curriculum levels. This support could range from a talk over coffee to workshops to development support of full teams or curricula.

##### **Project 3**

To create **knowledge exchange networks** within and beyond AUAS, this project consisted of local Amsterdam symposia and the creation of both a national and an international network. Five university-wide symposia were organised every year, three called 'Knowledge Sharers', which provided the opportunity to share and celebrate local research integration activities and results, and two called 'Taste Makers', which were aimed at bringing outside expertise into the university. A national network of university policy officers with a focus on research integration was initi-

ated, and an international network between AUAS's partner universities was finally brought to life.

#### **Project 4**

We created and applied a **monitoring and evaluation scheme** based on scientifically founded indicators with several strings of longitudinal research. The underpinning of this project was that because we ask research-informed actions of our students and educational teams, we should do the same in our programme strategies.

#### **Project 5**

A **university-wide research group** was developed with a focus on the interaction and integration of education, research, and professional action. This development had already been adopted by the university board, and it made sense for the programme owner to add this project to the strategic programme activities.

### **4.2. The mechanism of change across the projects**

The core of the mechanism to create movement was the interaction between the hands-on assistance for educational teams (project 2) and systematically reoccurring, university-wide symposia (project 3), thus creating awareness of institutional strategic goals on the integration of research and education and the desire to realize these goals (Box 1 and 2). Several teams interacted with the online tool (project 1) as their starting point. At all times, programme managers, lecturers and educational teams were in the lead and owned their change processes, whereas the strategic programme merely provided overarching guidance. Project 5 was an overarching project to secure the future of the evidence-based change mechanism and is left out of Figure 1.

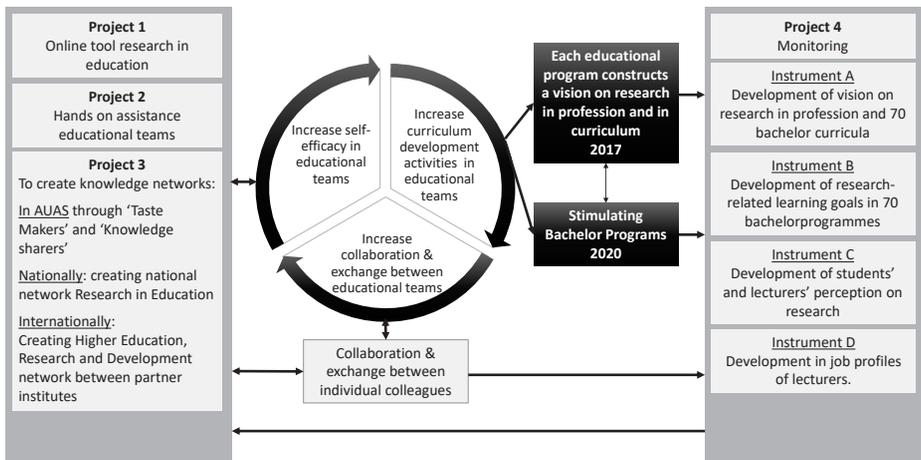


FIGURE 1

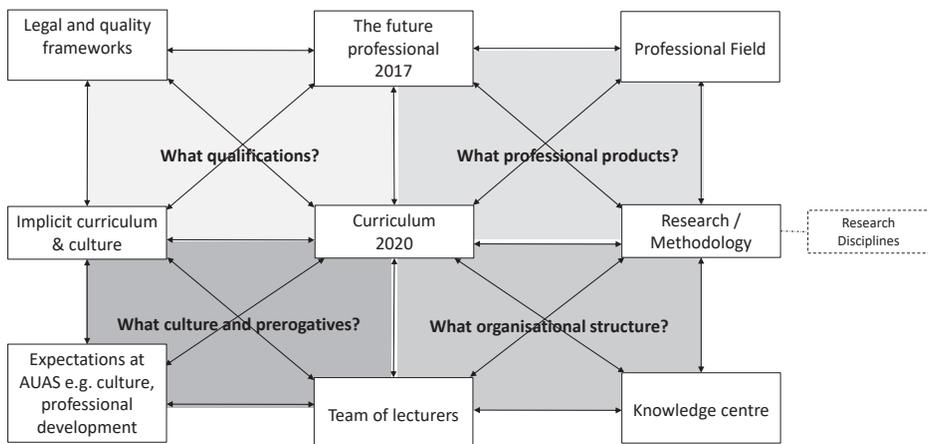


FIGURE 2

The online tool (project 1) provided an overview of the different starting points educational teams used to enter their trajectory of bringing research more into their curricula (see Figure 2).

Each of the boxes at the outer lines of the framework could be a starting point. For instance, a programme could have had an assignment to improve as an effect of a quality assurance round (upper left corner box), the lecturer in the educational team wishing to bring in more research

(middle lower box) or the professional field changing in response to a new approach (upper right box). Wherever the starting point, experience showed that educational teams needed to address all the boxes to improve their curricula. In the online tool, arrows between the boxes provided reflection questions to address during curriculum design. Answers to the questions could be archived and shared online with other educational teams. Use of the tool could be preceded or followed by tailor-made assistance – talking over coffee, workshops, team support or curriculum development – and was showcased in knowledge-sharing sessions.

The Taste Maker symposia were intended to draw in colleagues who were not yet the most active on research integration, but were curious about particular topics, such as critical thinking, systematic curriculum development, students as partners and quality enhancement. At the Knowledge Sharers, AUAS's own examples of research integration activities in particular educational programmes were showcased. This increased lecturers' self-efficacy on the topic and encouraged them to talk more actively about their plans to the strategic team members and among each other. In every symposium, the connection to the strategic programme was explicated, and hands-on assistance was always offered. An overview of topics and numbers of participants of the Taste Maker and Knowledge Sharer symposia is presented in Table 1.

As soon as new colleagues would express enthusiasm on any relevant topic, the option for hands-on assistance would be explained, which often resulted in meeting over coffee. The mechanism also worked the other way around, with hands-on requests in particular teams resulting in presentations by lecturers at one or more symposia. All known participants would be added to our newsletter, which frequently showcased all activities, developments in educational teams and tools.

The exchange and creation of knowledge within and beyond AUAS was strengthened by the formation of a national network of both a national and an international network of policymakers discussing their own practices. Also, the strategic programme took the initiative to organise AUAS's first Research Day, purposefully addressed to researchers, lecturers, and support staff.

TABLE 1. Topics and participation of Knowledge Sharer (KS)  
and Taste Maker (TM) symposia

Yr	Topic	Partic.
'16	KS Instrument and head lecturers	28
'16	TM Students as partners in research and education	20
'16	TM How to educate knowledgeable professionals?	15
'16	The Higher Education Conference 2016	360
'16	KS The role of head lecturers	19
'16	TM Critical thinking	30
'17	KS Rationale for the curriculum	21
'17	TM Constructive alignment	32
'17	TM XXL Four perspectives on research integration	67
'18	KS The illusion of quality limitations	62
'18	TM Lecturer/researcher collaborations	20
'18	TM Living labs	63
'19	First Amsterdam UAS 'Research Day'	290
'19	KS Share your curriculum development issues	22
'19	KS Talent connections	20
'19	TM Innovative spaces for research and education	35
'19	The Higher Education Conference 2019	175
'19	TM Confusion and silence as pedagogy	20

International colleagues shared their knowledge in Taste Makers and at the Higher Education Conferences in 2016 and 2019, which showed Amsterdam colleagues multiple international possibilities. The UREKA Higher Education Research & Development network, initiated by AUAS, provided additional opportunities for collaboration (<http://www.ureka.eu/joint-activities/herd>).

The monitoring instruments provided insight into the starting point and the changes during the process (for all details, see paragraph 5 of this chapter).

The creation of the university-wide research group Higher Education, Research and Integration (HERI) provided a start for steps to take after this five-year strategic programme, particularly in line with ADKAR's

phases of increasing ability and knowledge in AUAS (see also Future Perspectives). HERI's research has spanned the micro, meso and macro levels of AUAS considering the integration of research, education, and professional practice in higher education institutes (see also [amsterdamuas.nl/heri](http://amsterdamuas.nl/heri)). It again showcases that AUAS is willing to empirically underpin the innovation of its own practices, as the inclusion of the monitoring instruments also demonstrates.

## **5. Effects of the programme as monitored**

This paragraph presents the instruments and the first findings of the longitudinal monitoring of the programme (project 4).

### **5.1. Purposes of monitoring**

This served two purposes: a *reactive* one through its evaluating/monitoring function on the changing practices in educational programmes, and a *proactive* one as the accumulation of existing practices. The reactive and proactive purposes contribute to the development of knowledge (ADKAR, Box 2) required for constructive contributions to the organisational strategic ambitions.

This accumulation fed into the activities of the other projects and thus into changes of educational practice. It influenced new policy development in AUAS and was published nationally and internationally.

### **5.2. Instruments and effects**

Matching the aims of the programme, the monitoring and evaluation scheme consisted of four instruments related to the integration of research and education throughout the organisation and nationally; see Table 2 for an overview.

TABLE 2. Longitudinal monitoring and evaluation instruments 2015-2020

	<b>Subject</b>	<b>Method</b>
A	Vision for research in profession and undergraduate curricula	Qualitative analysis of the written self-reported evaluations of programmes in 2011-2015 and 2016-2018
B	Research-related learning goals in undergraduate curricula	Qualitative analysis of the research-related learning goals in all undergraduate study guide texts in 2015/2016 and 2018/2019
C	Perceptions on research in professional action	Quantitative survey study administered to students and lecturers in 2017 and 2019
D	Research-education connection in job profiles	<i>Nation-wide</i> qualitative analysis of research and education, tasks and competencies in job vacancy texts in 2016, 2017, 2018 and 2019

### **Instrument A: Vision**

This instrument mapped the development of reasons for educational teams to include research in study programmes. These were captured as written down in tri-annual self-evaluations and qualitatively coded and analysed, applying grounded analysis (Charmaz, 2006). In the first measurements, many educational programmes lacked a vision, or stated research was needed because the university board or the national professional framework requested it. Other reasons for research included preparing students for high-quality professional practice and contributing to professional development. Educational or pedagogical reasons were also collected, such as enhancing the quality of education by using research as a learning resource. The instrumental reasons were less reported in the second measurement, indicating changing perspectives.

### **Instrument B: Learning Goals**

This extensive monitoring instrument captured changes in learning goals in all the modules of all 70 AUAS undergraduate programmes. The intended curricula were considered as written down in the study guidelines, following the qualitative measurement and analysis procedure of Verburgh and Elen (2013). The intermediate results of three programmes across

three faculties showed a slight increase in the occurrence of research-related learning goals. Instrumental research skills either increased over time or were most prominent at both measurement points, compared to knowledge of research results or methods, critical thinking, curiosity, and integrated research competencies. Attention to knowledge of research results differed across study programmes. Learning goals on knowledge of research methodology and critical thinking were scarcely mentioned and became even scarcer over time in these three programmes. Learning goals pertaining to integrated research competencies (learning to do full research) were less clearly described than the other learning goals, and their occurrence differed across the study programmes analysed thus far.

### **Instrument C: Perceptions**

The Research Attitude in Vocational Education Questionnaire (RAVE-Q; Griffioen, 2019a, 2019c; Griffioen, 2020) measured students' and lecturers' perceptions of research in the profession, specifically their affective attitude towards research, cognitive attitude towards research, research self-efficacy, expectations of professional research use, experience participating in research and perspectives on the importance of it and research culture. Lecturers were on average more positive on all scales except for research self-efficacy and affective attitude, on which students scored significantly higher. Students' perceptions were mostly consistent between 2017 and 2019. Lecturers on average showed a slight but mostly insignificant growth in scores on all scales, as indicated by a means analysis. The relatively research-intensive faculties within AUAS showed higher scores for both students and teachers. These findings are congruent with those on the vision profiles and the learning goals.

### **Instrument D: Job profiles**

To provide insight on whether the hiring of lecturers shows change in teaching and research responsibilities over time, job vacancy texts were annually studied at a national level for UASs as well as for research-intensive universities (Griffioen, 2018), following the procedure of Pitt and Mewburn (2016). The job vacancy texts, of UASs more so than of other

universities, show that the expectations and competencies for new lecturers to perform in both teaching and research were roughly unchanged between 2016 and 2019. Development towards more explicit and tighter connections between research and education tasks and competencies in recruitment practices would have matched the desire as realised in the primary processes of education and research.

In addition to the planned instruments, at the request of the national working group which was assigned to implement more professional master programmes in the Dutch, we undertook an international systematic literature review to provide insight on how research is positioned in higher education curricula, as described within higher education empirical literature (Griffioen et al., 2019). This analysis of over 6000 entries showed that curricula have hardly been studied with respect to research integration and that more research is thus needed.

## **6. Future perspectives**

This paragraph looks ahead from the current position. Where are we in the organisational change process described as phase of awareness, desire, knowledge, ability, and reinforcement (Hiatt, 2018)?

### **6.1. From desire to knowledge: informed choices and design**

The strategic programme 'Research into Education' was implemented in 2015 to create awareness and desire in educational teams related to the topic of integrating research in education. The current situation towards the ending of the five-year programme shows that the wider organisation of AUAS indeed went through the ADKARs phases of Awareness and Desire. Many educational programmes have gone through one, two or even three cycles of research implementation in their curricula. As was hoped, the programmes' activities have also kick-started the awareness and desire to contribute of support staff and management in both

faculty and central positions at AUAS. AUAS now formally declares itself a ‘knowledge institute’ that disregards the differences between research and education. ‘Learning communities’ and ‘centres of expertise’ are the new magic words at AUAS bringing the two concepts together, but the trajectory at AUAS so far has shown that such words will not ensure long-term connections between research and education. Only smart and precise choices and design at the detailed level can do so.

These choices illustrate that our increase in curriculum development activities also brought to the surface how little we collectively know about functional connections between research and education, particularly for higher education applications. We must be aware that our next ADKAR phases – Knowledge and Ability – will demand in-depth investment again. Creating desire is a small thing compared to developing knowledge and creating large-scale ability, especially for the long run. The new research department HERI is expected to help bring knowledge and reflection, starting from the methodology for professional knowledge (Griffioen, 2019b). A new strategic programme 2021-2026 needs to bring about professional enhancement at all levels, which will engender ability across the university and the same balanced desire to contribute that many educational programmes now demonstrably have. The support staff will need to provide balanced reinforcement, in line with the strategy. New AUAS partners which need to be included, such as policy advisors, research teams, non-education management, will make the implementation tasks ahead more complex.

## **6.2. Toward embodied practice**

Through this type of hands-on university development, the notions of a research–teaching nexus that have so far been mostly normative (Trowler & Wareham, 2008) can grow into empirically founded practices. The written strategy of a university can become practice through the implementation of a strategic programme, as described here. Then, such a policy document can indeed become the ‘embodiment of practice, which makes that

practice knowable by others, repeatable over time' (Freeman & Maybin, 2011, p.165). Hopefully, this chapter can facilitate the embodiment of related implementation strategies to integrate research in education, in UASs and beyond.

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THEME 4

**PEDAGOGY AND PRACTICE**

(Página deixada propositadamente em branco)

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## **FROM HUMBOLDT TO NETFLIX: EXAMPLES OF HOW TO PROMOTE STUDENT AGENCY IN HIGHER EDUCATION**

**ABSTRACT:** Student agency is becoming widely discussed in higher education, particularly in response to a sector that is increasingly becoming dominated by 'new managerialism' approaches influenced by massification, competition and marketisation. Reflecting on this existing context, this chapter aims to discuss the role of the student in higher education. The chapter starts with a brief contextualisation of *Humboldtian* ideals of higher education and how these connect with student agency. We reflect on how agency is being portrayed into the system as part of 'policy technology', which does not fully empower the students' role. At this stage, the notion of 'power' balance is introduced which will add to the discussion of how this 'power' shapes the concept of lecturer and student agency at different stages of university practices.

We then discuss how student agency can be promoted in higher education by looking at learning environments, assessment, and the curriculum. We provide examples and case studies drawn from the literature. Within the curriculum we finalise by discussing a Netflix approach to higher education based on blockchain technology and personalisation of learning. This provocative scenario aims to foster readers to reflect on possible changes into higher education pillars, particularly those related to curriculum design and quality mechanisms.

The paper ends with a short reflection on how cultural aspects in different higher education institutions may shape the level of students' ownership and self-regulation of their learning process.

**Keywords:** Student Agency, Policy, Curriculum, Learning

### **1. Introduction**

Higher education (HE) has been historically a sector where knowledge is shared among learners and academics. However, the involvement of students as active contributors to generating and producing knowledge

has not been widespread. One of the most famous attempts to bring together students as active knowledge contributors in universities was developed by Wilhelm von Humboldt, a German philosopher (among other specialisms) who lived between the eighteenth and the nineteenth centuries. Humboldt's concept of the university in Germany in the nineteenth century was a place where the student had the opportunity of engaging with an environment where research and teaching functioned symbiotically and where the student had the possibility of embracing the freedom of study which combined both of these areas of the academic life (Ash, 2006). Learning occurred in an environment where research and teaching took place side by side, and where students constructed knowledge in an inquiry and research-based environment (Huet, 2018). Humboldt believed in individual freedom arguing that students had as much right to decide about their subjects as professors had the right to choose what they were going to teach. Those views were significant at that time and were in contrast with a stricter curriculum in France (Ash, 2006). However, with the massification of HE, views of the student role in universities have been shifting towards other aspects of university life and less attention has been given to the student role in learning. In fact, with the increasing number of students in HE, particularly from the middle of the twentieth century, universities and teachers had more difficulty in adopting *Humboldtian* ideals of allowing students to collaborate more actively in their learning; as reminded by Nybom: "*European Ministers of Education and top-level bureaucrats seem to have moved in the opposite direction*" (2003, p. 16). Students became a number within a traditional paradigm of a lecturer-led transmission of knowledge. The pressure to move higher education to be made available to everyone, expanded the number of students enrolled in institutions. This boom in student numbers was not often matched with the correspondent number of teachers or teaching resources which put pressure on the management of universities, forcing them to adopt a more structured and efficient view of higher education.

Moreover, it is important to remember that the lecture theatre was designed based on the paradigm of transmission of knowledge from the

‘Lector’ (in Latin, the person that proclaims the scripture readings) to the monks who vigorously copied what they were listening, without any form of questioning or interaction. The word ‘theatre’ originates from the Greek ‘the beholding area’ where the audience would sit to view a spectacle (Beichner, 2014). Student agency was far from being the mainstream ideal of education in ancient history.

From the middle of the twentieth century new educational paradigms, centred in how students learn, started to be introduced in the higher education pedagogical lexicon. Constructivism and Social Constructivism, Active Learning, Collaborative Learning were all learning theories and educational approaches that explored the idea that students learn better when they have space to reflect on their learning experiences and discuss their learning with each other (Biggs & Tang, 2011; Bonwell & Eison, 1991; Kozulin, 2003). Furthermore, and in countries where students pay high fees to study, student voice has become more visible in decision making and influencing the management of universities (Warwick, 2016), more able to complain to the regulator, (Dandridge, 2019) and acting frequently as consumers, reinforcing instrumental attitudes to learning (MacLellan, 2001). We argue that this instrumental attitude to learning goes against the main principles of what higher education should be. We build from Humboldt’s view of higher education whilst we reflect on the values of agency and student ownership of their learning, to make decisions and have a voice about how, when and what they learn.

In this chapter we discuss how an effective strategic change in looking at student agency may result in a different higher education sector. We start by discussing the concept of agency and link it with the *Humboldtian* view of higher education. Then we move to reflect on how universities can implement spaces for students to express themselves and have more agency in their own learning and the curriculum design. We will make recommendations to how institutions should position themselves to improve students’ own self-determination in their learning process based on a set of scenarios. We conclude by reflecting on how technology and societal habits may influence the future of higher education pedagogy.

## 2. Student agency and Higher Education: two worlds apart?

There is no broad consensus about the definition of student agency although most of the authors refer to ownership or sense of ownership of the learning process and the ability to make decisions – see for more detailed definitions in the work of Charteris and Smardon (2018) and Matusov et al. (2016). Agency is not a new concept; it has been widely discussed as part of a libertarian and neoliberal view of society where individuals are empowered to make choices about their own lives (Matusov et al., 2016). In education, it links to theories such as self-determination (Ryan & Deci, 2000), the development of a ‘growth mindset’ (Dweck, 2008) or self-regulation (Bandura, 2001; Martin, 2004), all of which were somehow discussed by Humboldt in his view of higher education (Ash, 2006; Nybom, 2003). Humboldt had a view of the students as actively engaged with learning, becoming agentic in their own curriculum, and learning path; in other words, students were perceived as equal agents in the university. As we discussed previously in this chapter, even if Humboldt’s ideal of higher education have been widely appreciated and defended, pressures from governments and top-level bureaucrats related to the massification of HE, the economic sustainability of the sector, and quality, regulation and accountability, have led the higher education sector to become more linear and restrict in how students learn the curriculum.

To frame the concept of agency in education we take account of the humanistic movement that frames the concept of power as a product of agency with which individuals are endowed naturally (Khatib et al., 2013). This power can be deployed or taken back (Charteris & Smardon, 2018). It is worthwhile reflecting on this notion of empowering students as this often fails to materialise the concept of agency into action since it becomes lost in a neo-liberal world of making others responsible for our actions. This adds to the dilemma of agency manipulation in the sphere of education (Matusov et al., 2016). Similarly, Czerniawski (2012) alludes to the danger of two competitive narratives in agency in education, one where we use agency to empower and to transform education and a second one where we use agency as a ‘policy technology’ (2012,

p. 131), as a way to feed into the narrative of increasing student voice without proper change. Building on data collected from interviews with lecturers and students, Czerniawski (2012) discusses that for student voice to become transformative, lecturers and policymakers in education need to move away from a 'synthetic trust' that is typically manifested in student voice initiatives. Similar findings are discussed by Freeman (2016) and Seale et al. (2015).

Student voice can be conceived as a 'forced-choice,' since students are positioned within a given discourse that makes the 'chosen' line of action the only possible action (Charteris & Smardon, 2018). For example, if we present to students Active Learning as the most effective way of higher education pedagogy and support our claim with research in the field, and then ask students "what is your favourite way of learning?" they will probably avoid saying "I want to participate in lectures because I like to listen to the lecturer delivering the content". In their mind, the 'right' answer would perhaps be "I prefer to learn with my colleagues by solving problems/questions".

Higher education has become inundated by this materialistic view of agency where students become actors with a script, but no effective ownership. This is self-evident when looking at structures in higher education management with typical student representation either at a course level (course representatives, course team meetings, student evaluation surveys) or at university level (university pedagogical structures or school level committees). However, one may ask "what is the impact of this representation? What actual change has been drawn by students' representation in the curriculum or universities?". One can reflect on previous experiences while seating in course level or school/departmental level meetings and looking at the student role in those meetings. Firstly, students are frequently underrepresented in these committees/meetings; secondly, they must share their view with their own lecturers which pose a series of power balance challenges; thirdly, meetings are frequently organised based on hierarchy and traditional academic arrangements. In this vein, it is important to report on the findings from the study conducted by Lizzyo and Wilson (2009) who, after inquiring twenty students

about their own experiences in departmental meetings, found out that students reported on the complex motivations and conceptions about the role and were particularly concerned about the expectations that academic staff had about their role in such meetings. They concluded that the overall effectiveness of the role depended on the willingness of academics and management to engage in a constructive dialog with the students. Students did not feel safe to display their agency in such an academic environment. This goes profoundly against the *Humboldtian* model of higher education.

Agency is a dynamic process that is generated through a range of elements within education. It is co-produced by the individual when it relates to objects or other humans rather than possessing an “*ontological existence that is devoid of agency*” (Charteris & Smardon, 2018, p. 61). Students need to learn to become agentic in their own learning as much as factory workers need to learn to display their agency when invited to attend meetings with senior management or when making complex and unexpected decisions about their own work.

Charteris and Smardon (2018) argue that by making explicit opportunities to deploy student’s agency when we develop new generation learning environments, we “may strengthen and enhance students positioning in relation to their own learning” (Charteris & Smardon, 2018, p. 55). A similar approach to student agency is provided by Matusov et al. (2016) who discuss the existence of an emergent process that brings something new, innovative, and creative to the learning process; those changes in context may place different demands on students, which in turn develop different competencies.

Within the context of higher education where dispositions of agency rely on effective balance of power, it is important to reflect on the work by Foucault (2012), Gore (1995), and Nieminen and Hilppö (2020) who discuss the power relations between subjects and their positions within the discourse of agency. This is what Nieminen and Hilppö (2020) and Charteris and Smardon (2018) refer to as ‘ecological agency’; how the individual interplays with learning environments and the opportunities for agency that these learning environments convey to the individual.

It highlights the importance of identifying affordances portrayed in the learning environment, and how those are tied to their broader social and institutional contexts (Charteris & Smardon, 2018; Nieminen & Hilppö, 2020). That is, we need to encourage a culture of agency that scaffolds, within the ecosystem of what universities are, how students may display their agency and, importantly, how other stakeholders let go of their existing power. An ecological conception of agency is situated in a specific context and it is dynamic. It may change over time depending on past achievements, understandings, and patterns of action between those that display agency and those that let go of their power (Biesta et al., 2015).

In the next section of the chapter, we will be looking at three areas where we believe agency can be actively deployed by students. We will be discussing these three areas based on existing research and looking at possible scenarios.

### **3. Agency and Learning Spaces**

Charteris and Smardon (2018) discuss reimagining and recreating new spaces as a tool to promote innovation in what typically was seen by academics as hostile environments for innovation.

By reimagining spaces, universities may foster a new role for students in the learning environment, one that is more conducive to becoming more agentic in their learning. An example of this is a learning resource centre, which provides students with opportunities to learn and displaying agency in different ways: searching for books, navigating the Internet, collaborating with peers, studying alone, working on computers. Students have the opportunity to choose and mix according to their own interests. Conversely, a lecture environment typically conveys a message of instructor control. The position of the podium, often used in lecture theaters, symbolises an instruction-led learning environment (Casanova et al., 2018). Nevertheless, if this room does not have a podium and if everyone in the room has a similar power (i.e., don't have access to a projector, a whiteboard or with a layout where there is a focal point) the room is

portraying a message that everyone has the same degree of power. This is particularly important as it fosters a more balanced approach between the role of the student and the role of the lecturer. See for example the work from Casanova et al. (2020) or from Mey and May (2018) which propose the design of learning spaces that foster student agency.

Charteris and Smardon (2018), Casanova et al. (2018) and Boys (2011) are just a few of the authors suggesting that student agency is a crucial element when reimagining educational spaces with a promise of pedagogical flexibility and possibilities for shifts in teaching and teaching relations. In socio-spatial theory, space has the potential to shape practices and social interplay; it therefore influences the social politics of the relational environment (Charteris & Smardon, 2018; Massey, 2005). These arguments are supported by research that suggests that the design of a learning space influences on how its users conceptualise pedagogical practice (Casanova et al., 2018; Crook & Mitchell, 2012; Jamieson et al., 2000).

Reflecting on these theories, we believe that universities should change the way spaces are designed towards spaces that are more conducive to experimentation and where the role of the lecturer is not as explicit as it is in traditional rooms. One way of addressing this is by engaging students in the redesign of the learning environments. One practical example is provided by Lincoln University in the UK. The space planning team facilitated a workshop in 2013 involving fifteen students and lecturers and, through the use of design metaphors, the participants identified a set of factors that could inform the design of learning environments. The findings were clustered into two groups: (i) spatial factors, which were concerned with the physical environment in general, including the room layout and furniture; and (ii) social factors, which were concerned with the degree to which a room was facilitating participation, engagement and collaboration (Williams, 2014). The outcomes of the workshop informed the design of new learning environments at Lincoln University. Importantly, it provided a rationale for students engaging with the process of building their own space allowing them to enact agency that had a tangible impact on how the university was built. To ensure that

students and lecturers had a similar starting point and to create space for a balanced share of power, Williams (2014) suggested using design metaphors to involve all participants in the same framework of thought. A similar approach was developed by Casanova and Mitchell (2017) who conducted participatory design workshops with the objective of re-designing the learning environments of the future. In this specific case, the authors decided to divide students and lecturers as they felt that by mixing both groups, the lecturers' voices could suppress the students' voices during the discussions whilst making design decisions. Similarly, the authors also used design metaphors to ensure that all participants started with the same framework of reference. These authors concluded that involving students in designing learning environments had a significant impact on their own self-esteem and sense of belonging, as well as providing different solutions for space design.

#### **4. Agency in Assessment**

Assessment design in higher education rarely considers student agency. It is typically a lecturer-based exercise that allows little possibilities for students' agency and ownership of the assessment process; see for example the work from scholars such as Beaumont et al. (2011) or Nieminen and Tuohilampi (2020). Boud and Falchikov (2006) noted that, in assessment, students are mainly recipients of the actions of others. Charteris and Smardon (2018) claimed that the current assessment practices in higher education either neglect the notion of agency or even hinder students' agentic development. It is important to reflect on this psychological notion of agency in the assessment process, whereby the culture of higher education conceptualises a pre-existing role for the student and the lecturer.

Winstone et al. (2017), for example, conceptualised agency as a feature of the individual. However, one may ask whether conditions to enact agency in the assessment are being built in higher education. For example, what role does the student have if s/he only asked to engage

with feedback about the assessment at the end of a sequence of learning, without time or opportunity to use it to improve the assessment or related tasks (Molloy et al., 2019)?

The interplay of assessment and agency frequently neglects the socio-cultural aspects. In higher education, the role of the lecturer traditionally is to create/design the assessment, to grade and to provide feedback; whilst the role of the student is to submit the assessment and to wait for feedback and for the grade to be released. These ‘power’ relationships are discussed by Nieminen and Hilppö (2020) who drawn from the work of Foucault (1977) claimed that these ‘power’ relations produce in students and lecturers an implicit positioning, and that those are stable positions that control what can be done within the assessment process. That positioning is framed within the socio-culture environment of higher education (Arribas-Ayllon & Walkerdine, 2008). To change this approach, it is necessary to change the discourse; to reset the student position in the assessment process by enacting several elements in the assessment and reframing what we expect from students. Furthermore, Boud and Molloy (2013) argued that, beyond unidirectional actions between the lecturer and the student, lecturers have their own share of responsibility in designing better and more connected assessments which allow students to make use of the feedback received. Therefore, changes are both needed in the role performed, as well as the cultural shift of how assessment is designed in higher education. We provide below some examples of how the design of assessment may foster student’s agency.

#### **4.1. Co-creating assessments**

Deeley and Bovill (2017) developed a study in a Scottish university aiming at involving students with the assessment from the outset. To engage students, they used them as partners in co-creating the assessment brief, the title and the criteria. They also implemented a peer-assessment strategy to allow students to obtain feedback from their peers. This study revealed how this approach improved assessment literacy and made stu-

dents more motivated and engaged with their assessment and feedback. In this model of assessment, the lecturer lets go of her/his creation role of the assessment, sharing it with the students who developed their own assessment artefact in an agentic manner. Other similar studies have been developed with similar results (Zhao & Zhao, 2020). This approach is perhaps the most radical approach to agency in assessment, but there are others more balanced as we explore below.

#### **4.2. Self-assessing work**

Using exemplars as assessment standards and linked them to self-assessment is a widely used approach to promote more agency in students' assessment. Typically, students' self-assessment is mainly used for developing assessment literacy and increasing awareness of the criteria. The use of exemplars to promote a better understanding of what is intended by the assessment is a widely discussed practice (Carless & Chan, 2017; Dixon et al., 2019; Jonsson, 2013). However, Nieminen and Tuohilampi (2020) have found that the higher the stake of the assessment moment is (summative rather than formative) the more authentic and agentic it is perceived by students.

#### **4.3. Cycles of feedback**

Feedback on student performance is viewed as one of the most influential and effective learning paradigms (Hattie & Timperley, 2007) and is widely appreciated by students as part of their learning experience. Winstone and Boud (2019) recommended that feedback should be delivered with a more dialogic focus on student engagement and increasing their responsibility in the process. Based on the concept of single-loop and double-loop learning, Carless (2019) introduced the concept of feedback spirals and loops. This concept represents how students learn when they work on assignments as part of their modules or programmes of study.

For the author, a loop implies an endpoint of the feedback; it can be at an assessment/module level (single-loop) or at a programme of study level (double-loop), which would represent a multitude of opportunities in different assessments; conversely a spiral would imply feedback that is more ongoing and developmental (Carless, 2019). Feedback spirals involve students making sense of inputs from a range of sources over a period of time in order to improve work and enhance learning strategies. In other words, it implies that students develop feedback literacy. In a similar vein, Boud and Molloy (2013) developed the concept of Feedback Mark 2 which happens when feedback is less controlled by the lecturer and encourages greater agency from the student in closing the feedback loop. In this concept of feedback, students are not just receiving inputs from their lecturers, but are actively involved in seeking information for improvement and are responsible for self-monitoring their progress. This approach to feedback generates an increase in student feedback literacy, but it simultaneously requires more effort and willingness from the students to change their role in the feedback process to a leading one. Both concepts allude to a more agentic role of students in the feedback process, one where they become agents in creating their own understanding and pathway for future development.

These three examples provide opportunities in assessment where students can develop their own agency in the assessment process. By incorporating these types of measures, we are not only providing a space for students to become more agentic in the assessment; we are also developing students' own assessment and feedback literacy. However, as noted by Boud and Molloy (2013) all of those require that lecturers design better and more connected assessment that encourage students to make their own connections with the feedback received.

## **5. Agency, curriculum and Netflix**

As we discussed above, agency has been predominantly conceptualised as self-managed student ownership over the learning process (Ryan

& Deci, 2000). This traditional view of agency can only be upheld while reflecting on those *Humboldtian* ideals of promoting students' own free-will and how they learn in higher education. Nowadays, the curriculum has been designed as an inflexible and constrained framework dictated by quality procedures, institutional cultures, external bodies' requirements or sector level expectations (Barnett & Coate, 2004). The student role in this design process is, as we discussed previously, either part of a 'policy technology' exercise or provides some spaces for interaction that often fail to provide an ecological approach to agency (Carey, 2013).

Within the curriculum there seems to be an increasing demand for alternative and more personalised opportunities for learning. The concept of blockchain education, for example, maybe an interesting and innovative approach for promoting student agency in their learning. Blockchain technology is built on the principles of a decentralized environment where transactions and data are not under the control of any individual organisation. Rather than having one university certifying the degree, that process is made by a cluster of external entities, the blockchain. This approach poses challenges to quality assurance mechanisms, which typically fall short in going beyond the typical relationship between the higher education provider and the regulator.

If successful, this blockchain approach may result, in the future, in higher education degrees that are provided by a multitude of higher education providers, but the selection and organisation are made by the tutor and by the student in collaboration, whereas the certification is taken by the blockchain. For example, the student and the tutor would be able to discuss and set up the learning path based on a series of learning outcomes (LOs) and learning units (fig 1 – a). They could choose the institution(s) and the lecturer(s) responsible for delivering such a learning unit. The content could be either tailored to the student (based on a series of learning units aligned to specific LOs) or based on existing modules offered by the institution (fig 1 – b). Certification of LOs acquisition would be done by the blockchain through recognition of micro-credentials (fig 1 – c).

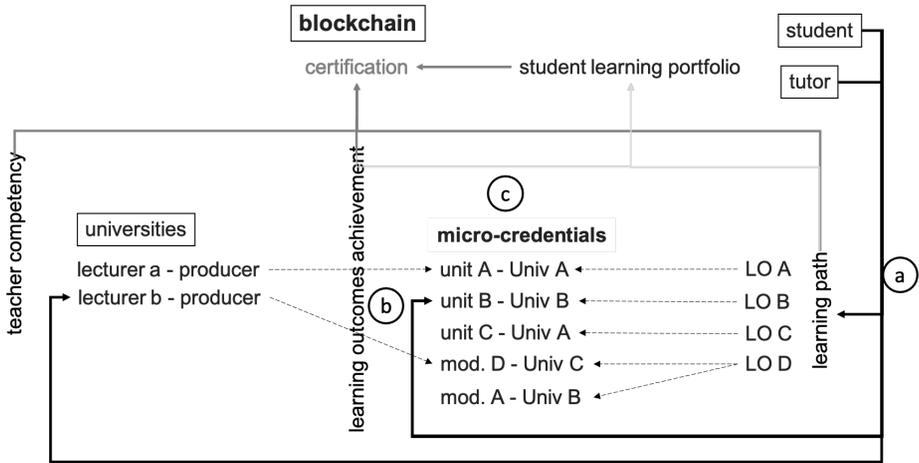


FIGURE 1 – example of a blockchain approach to higher education

For a better understanding of this approach, we use *Netflix*, the streaming platform as an example of a content-sharing platform (fig 2). *Netflix* is a web platform with video content that users can choose from, based on their level of interest or habits of consumption (McDonald & Smith-Rowsey, 2016). *Netflix* is both a publisher and a distributor of content. Let us imagine that rather than video content, *Netflix* was an aggregator of units of e-learning content (with videos, activities, and assessments) generated by different lecturers from different universities (using the Netflix analogy, the publishers). Each unit would be built to meet a specific LO. *Netflix* validators (which could work externally and affiliated to the blockchain) would be responsible for ensuring the quality of each unit and attributing micro-credentials to recognise student achievements (fig. 2 – a).

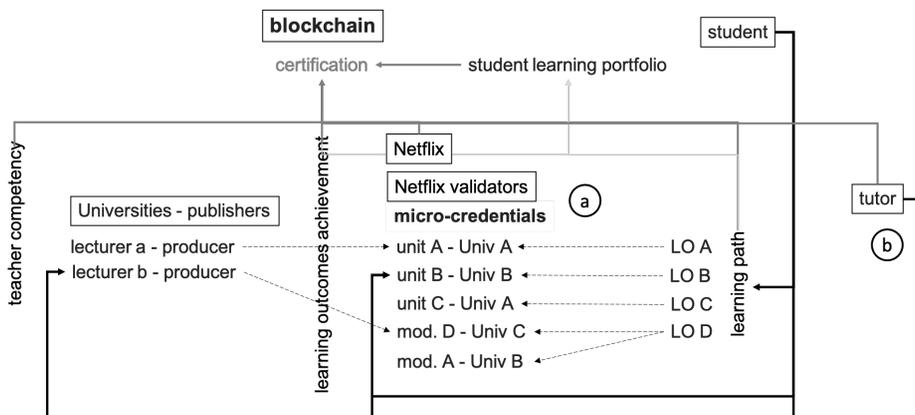


FIGURE 2 – Example of Netflix within a blockchain concept

*Netflix*, the aggregator of learning units, would be certificated by the blockchain. Learning units' quality and teachers' competency would also be certified by the blockchain. However, following this approach the student (with the help of a tutor) would be able to choose and mix which units and which lecturers they would want to use to achieve specific LOs.

Students would not be students of one university, but they would rather associate themselves with an individual tutor recognised by the blockchain (fig. 2 – b) and both would codesign a learning experience based on what LOs were to be achieved. Students would exercise their agency by creating their own learning path. The blockchain would both ensure the quality of the content and alignment with the LOs and the certification of the *Netflix validators*. Quality, procedures, and accountability would be the responsibility of the blockchain allowing higher education to concentrate on learning and research. *Netflix*, or any other type of content sharing platform, would be responsible for making learning units more available and providing further opportunities for students to choose from enhancing their experience and encouraging further agency in their learning.

## 6. Final considerations

This chapter discussed the concept of student agency in higher education. We started by discussing *Humboldtian* ideals of higher education and looking at how these were propitious for students to exercise their own agency in learning. We reflected on existing practices of higher education to conclude that nowadays the sector has been influenced by a ‘new managerialism’ agenda (Deem, 1998) and a uniform approach to management and to the curriculum, whereby students become a number, lost in a consumer-based industrialised environment with very little agency (see chapter 1 in this book). We argue that higher education often uses student agency as ‘policy technology’, as a way to feed into the narrative of increasing student voice without effective change. We provided three examples of possible mechanisms by which students may become more agentic in their own learning and learning experience. Learning spaces and assessment are two areas where students can actively contribute without profoundly changing the traditional pillars of higher education. We then moved to one provocative scenario of using Netflix and a blockchain model to re-engineer the foundations of the sector. Although provocative and unsustainable, this scenario may lead to reflecting on the impact that blockchain technologies, Netflix and social media are having in society and consequently on the future impact they may hold for HE, particularly in how they can contribute to increasing student ownership, self-regulation and self-determination of the learning process. This chapter aims at encouraging the reader to reflect on the concept of student agency in higher education. It is worthwhile reflecting on this by looking at the main *Humboldtian* ideals of higher education and whether they would be so much different if they were written in this century.

It is possible to argue that some of the areas discussed here are easier to implement in some cultures and some higher education sectors than in others. The experience of the author suggests that student agency may be different to enact in northern-European countries when compared with south or east European countries. Issues of academic

identity, professionalisation and privatisation of the higher education sector which are exercised in different ways and at different levels (Fanghanel, 2011), may all be contributing factors for student agency to be performed in different ways. Comparing higher education cultures and how those may affect student agency is an area underexplored and one that would share light on a stronger role for student agency in higher education.

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## INDIVIDUAL LEARNING PATHS ON GLOBAL SHARED TEACHING: A MODEL/EXPERIENCE WITH BLOCKCHAIN-BASED CERTIFICATIONS

**ABSTRACT:** During the twenty century, several projects faced the challenge of adapting the curriculum to individual differences. Solutions based on digital reusable learning objects (LO) found difficulties because of the compromise between liability and flexibility in the distributed assessment. Blockchain offers safety and liability to certifications. This chapter describes a model of Adaptive Learning with the support of Blockchain, implemented at an experimental level at the University of Barcelona.

The students build their learning paths by engaging in the different LO and the assessment results are certified with Blockchain.

The development of this personalized learning path uses the Design Research model. During 2018-19 and 2019-2020, the design was applied in four groups at the University of Barcelona and it used the Ethereum platform for blockchain support. The adaptive distributed learning model was partially implemented with the collaboration of teachers from other institutions. The participants included 134 (2018-2019) and 132 (2019-2020) students.

It stands out the blockchain implementation design based on a two-steps process to avoid delays in the interaction with teachers. The students used the opportunities of the system to a reduced level of queries. Two useful developments were 'Edublocs Grade Book' (EGB) and 'Technology-Enhanced Assessment' (TEA), the first an online interface with Ethereum while the second a synchronized off-line software that facilitated the work of teachers.

**Keywords:** Adaptive learning, microlearning, learning objects, team teaching, blockchain

## **1. Adaptive learning**

Education faces fundamental challenges that go beyond the simple improvement of learning-teaching designs (Bartolomé, 2011; Bartolomé & Grané, 2013). It faces changes produced by Information and Communication Technologies (ICT) that, as described by Postman (1985) in the Syndrome of Frankenstein, affect not only our habits but also the way we think. It is under this premise that we can face some specific problems related to the design of teaching, as the individualisation of learning paths.

The extension of Higher Education during the Twenty century has generated the design of very structured curricula, with little space for individual differences, and large groups of students. They must take the same courses, getting the same competencies, doing the same activities, and be assessed with the same criteria to arrive at a 'standard' profile, far away from their individual needs or the needs of society.

Even if the society of information had not changed in such an exciting way, students differ from each other because they have different skills, different needs, different interests, different aims, different attitudes, different learning styles and different cultural contexts and experiences. However, society has changed. So, it does not need some kind of 'generic' professionals, but individuals who are capable of work and adapt to jobs that, perhaps, do not yet exist.

So, how can students build their own learning path, according to their interests and needs, and doing activities that are suitable to each individual? The educational system has a rich history in this searching of the Holy Grail, the magic recipe, able of solving the individualisation of learning, even if sometimes this work has been closer to practical innovations than to scientific work (Bartolomé, et al., 2018).

### **1.1. The beginnings of the twenty century**

The Dalton Laboratory Plan, designed by Ms Parkhurst, aimed to divert children energy to the pursuit and organization of their own studies in

their own way (Parkhurst, 1922). The Dalton plan was applied in the Dalton School in New York and at some hundreds of schools all over the world. It continues active in the 21st century.

Ms Parkhurst thought that the grading system of public schools, where every student in a group had to learn the same and in the same order, did not answer the individual needs of students. So, the Dalton Plan restructured teaching in Secondary Schools organizing laboratories, and students chose what to do every day. The starting point was that students with ten years old or more and who were able of reading and writing, had to be free to organize their own learning path. A similar strategy called the 'Winnetha Plan' was designed in 1922 with an exciting outcome: only half of the children with ten years old were able of this self-regulation (Corcoran, 1927).

Individualized learning was an issue for Secondary Schools at the beginning of the twenty century, but not for Higher Education institutions. They did not have the problems of massification that appeared later in the second half of the century.

## **1.2. Teaching machines and programmed learning**

During several years, 'education' had some character of Art, and psychologists did not consider that they could contribute to improving teaching (James, 1899). Skinner (1965) broke this thought and exposed how behaviourism could optimize teaching through programmed teaching and learning machines.

Sidney L. Pressey designed in 1920 the first learning machines, based on the concept of feed-back (Pressey, 1920). They were conceived to mark tests, providing feedback to the student. They operated mechanically, pressing buttons to choose the right answer.

Skinner incorporated this idea after 40 years of low acceptance, adding some essential contributions (Skinner, 1968):

- The subject had to 'produce' the answer, more than "choose" it.

- The 'program' had to be composed of little and simple steps so that students could pass them easily.
- The introduction of audiovisual elements was essential.

Programmed teaching reproduces the design of teaching machines (Lumsdaine & Glaser, 1960; Fry, 1966) despite it is identified generally with a programmed course on paper.

A book of programmed learning consists of items that include some information and a question. The students check if the answer is correct and continue with another item. The most relevant contribution is the concept of 'program' (Klotz, 1971). The first two models proposed were:

- **Lineal:** there is only one way. Different students do the same items in the same order at a different speed. If some answer is wrong, they will have to repeat it until they find a successful solution.
- **Branching:** There are several ways. Different students do different items according to their answers. One item could include more than one correct answer. Moreover, two different wrong answers could have different feed-back and take students to different items to follow their own learning path.

While teaching machines were not very used, programmed learning books were widely applied, especially in some areas as Health. Even now it is possible to find programmed books to prepare some subjects tests.

### 1.3. Individualized learning

Behaviourism did not answer the whole complexity of human learning and behaviour and teaching machines and programmed learning did not get the waited success. Psychology advanced to new ways in the second half of the twenty century. Cognitivism arises as opposition to Behaviourism, and it encompasses very different versions (Zumalabe, 2012).

The mental representations suggested initially by Tolman, were incorporated in Cognitivism applied to Artificial Intelligence (Winograd & Flores, 1986). Constructivism holds that it is the child who builds the knowledge through discovery (Piaget, 1956; Bruner, 1990) and social constructivism (Vygotsky, 1978) implies that children learn with each other.

In the sixties, the concept of Individualized Learning appeared as a common denomination for different designs that gave students some options to follow different learning paths according to Constructivism Theory (Weisgerber, 1971). Personalized Learning gives special attention to the social dimension of the process. Both had a minimal but attractive application in Higher Education.

Learning contracts were agreements negotiated between students and teachers about the type and number of activities to do, differently for each subject (Stephenson, et al., 1993).

#### **1.4. Computers**

Programmed learning found its natural development way in computers (Coulson & Mullin, 1963). PLATO, Programmed Logic for Automated Teaching Operations, was a software and hardware platform developed by the University of Illinois and used for more than ten years at several Higher Education institutions (Paden, et al., 1977). Plato and other similar initiatives as TIPS, Teaching Information Processing System, generated individualized learning programmes under different names: CBI (Computer-Based Instruction), CBL (Computer Based Learning), CAI (Computer Assisted Instruction), CAL (Computer Assisted Learning).

The Personal computers (PC) appeared in 1965 with Programme 101, a model of Olivetti that cost US\$ 3000. The CBL received a new and powerful boost. Another critical factor was the irruption of Authoring languages as Hypercard, Linkway, ToolBook or Authorware, among others, easy to use by teachers to create their teaching courses.

If the computer had to guide student's learning, it had to own some intelligence, and this was considered to be a priority (Millward et al.,

1978). ICAI (Intelligent Computer Assisted Instruction) systems applied decision-making from Artificial Intelligence (AI) to run the learning process, and that implied that machines needed to learn (Larkin & Chabay, 1992). Despite that ICAI never arrived at significant solutions, universities incorporated these and other CBL solutions. The new graphic and sound capabilities of computers produced multimedia tutorials.

### **1.5. Internet**

Internet and the Web changed the situation. The old CAI on CD-ROM went out immediately and it was substituted by websites and pages by the end of 1994. New authoring languages allowed for developing easily tutorials adapted to individuals: exeLearning, GloMaker, Squeak, Easy-generator, Courselab, SmartBuilder or Articulate.

Again, the interest in AI solutions appeared with the suggestion of intelligent agents, mainly used for searching tasks but also in some kind of intelligent tutors (Chou, et al., 2003).

The Internet also provided powerful ways for interaction, promoting collaborative work and discussion fora.

The last development in this line is the TEALE (Technology Enhanced Adaptive Learning Environments). Adaptive learning relates to how to adapt content and path to individuals' characteristics (Karampiperis & Sampson, 2005). TEALE includes intensive use of big data and learning analytics. Initial research shows some positive results when the system adapts content to the student's learning style (Hwang et al., 2013) or cognitive styles (Limongelli et al., 2009).

### **1.6. Curriculum 'à la carte'**

Most of the previous solutions use technology to manage the activities students need to do, under the Behaviourism theory principles. Individualized and personalized learning assigns this task to the teacher, negotiating with the student in the case of learning contracts, assuming

Constructivism theory. In the twenty-first century, a new theory explains learning in terms of links and nodes of the learning network: Connectivism (Downes, 2005; Siemens, 2005).

Students build their own Personal Learning Network (PLN). Moreover, they reflect the PLN in a Personal Learning Environment (PLE) (Adell & Castañeda, 2010). PLE and PLN generate the adaptation to individuals.

The Internet provides students with the opportunity of choosing the activities that most adapted to their needs, skills, aims or learning styles. Initiatives as Open Educational Resources (OER) or Open courseware (OCW) had evolved to the MOOC movement. Massive Open Online Courses (MOOC) develop programs more complex than simple learning objects, under two models: cMOOC, with more elements of Connectivism theory, and xMOOC, more oriented to Behaviourism and Constructivism theories (Bartolomé & Steffens, 2015). MOOCs have evolved to other models, e.g. SPOC.

MOOCs are fascinating because they introduce a new element: we can individualize specific lessons or the whole curriculum. MOOCs let students organize their curriculum by allowing them to choose the subjects.

In this extensive history, we can observe how different elements are being incorporated, advancing in more complex solutions, but with two elements that define the different solutions:

- Who controls the process: the student (S), the teacher (T), the machine (M).
- Which theory defines learning: Behaviourism (B), Constructivism (C) or Connectivism (N).

## **2. Blockchain ‘formalizing’ non-formal learning**

In this quick revision of the different efforts for answering individual learning differences, we could recognise two significant trends: one is the solution based on machines, mainly based on Behaviourism theory; the other is the solution based on the construction of knowledge made by

persons, teachers and students, mainly based on Constructivism. However, now a new theory, Connectivism, not well established yet, gives a new perspective, where the network, the collective intelligence and the shared knowledge are the basis of learning. Table 1 summarises this history with the most remarkable characteristics of each method.

Method	Key element	Control	Theory
Dalton plans	Students choose between different activities developed in groups.	T	C
Teaching machine	Based on questions and feed-back	M	B
Programmed learning	Compound by items, include information and questions and are structured in lineal and branching programs.	M	B
Individualized learning	Where students work individually. The same activities in the same order, at a different speed, with additional activities if necessary.	T	C
Personalized learning	It gives special attention to the social dimension of learning	T	C
Learning contracts	Student and teacher negotiate a path of activities to do.	TS	C
Problem Based Learning	To solve a problem, students work collaboratively developing their own skills.	TS	C
CBL	Programmed learning on computers improves complexity and unlimited possibilities.	M	B
ICAI	Incorporating AI to CBL	M	B
Multimedia tutorial	Incorporating high levels of image, sound and video.	M	B
Web tutorials	Incorporating collaborative work and discussion spaces.	M	B
TEALE	Incorporating big data and learning analytics.	M	B
Learning objects (LO)	The Internet offers thousands of resources to learn specific issues.	S	C,N
PLE and PLN	Students build their own learning space, integrating LO	S	C,N
MOOC (x & c)	Students cannot follow individual paths in specific lessons but build individual curriculum by choosing the subjects to take.	S,M	C,N,B

TABLE 1. Individualized learning evolution

Non-formal learning has been transformed according to this theory: most of the non-formal learning is produced at this moment in the context of the Web, Youtube and other shared spaces. Every citizen is now a teacher who transmits his/her knowledge: how to repair a window, how to fix a bike, how to write an essay, how to calculate a distance. Furthermore, every person can choose the resource that fits his/her needs, interests, competence, when he/she decides.

Some sites have become very popular, such as the Khan Academy or TedEd (Petrilli, 2019). Others contain an endless offer of “educational” videos. Moreover, some specific sites as Merlot or P2PU are oriented to Higher Education.

Nevertheless, the step from this non-formal to formal learning clashes with a barrier: the formal system requires some type of certification. Moreover, the flexible running rules of networks do not facilitate that. The formal system is based on the reputation of institutions that recognise a degree of competence/knowledge.

Blockchain is a technology that could provide this reputation in the context of non-formal learning environments, as it has done in other fields, some of them so strict as the financial world with the bitcoin.

Some solutions are oriented to a “universal” knowledge reputation based on monetising learning. Others expect only to provide liability to a traditional degree (Alammary et al. 2019; Yumna et al., 2019; Kamišalić et al., 2019). That is not the approach of this project, where assessment is certified in the context of a standard subject, inside a “traditional” Higher Education degree, recognised and certified by national authorities.

The University of Barcelona is developing this different approach, based on the traditional structure of courses and subjects, allowing students to choose activities, incorporating old concepts as PLE, learning contracts, team teaching, learning objects and turning to Blockchain to guarantee the process (Rivera-Vargas & Lindín, 2019).

### **3. Edublocs project**

#### **3.1. Background**

The Edublocs project has been developed since 2018 in the subject “Uses, possibilities and limits of ICT”<sup>1</sup>, of the first year of Social Education degree (BA), at the University of Barcelona (UB). This project was implemented by researchers from the Institute of Research in Education (IRE – UB).

The objectives of Edublocs are: (1) to encourage the creation of learning itineraries made by the students themselves, (2) to manage these itineraries using blockchain technology.

The technological characteristics of the blockchain (identification, traceability, security) allow the design of a teaching and learning model based on the personalisation of learning itineraries, which transcends the limits of subjects, teachers, universities, and countries.

Based on the idea that multiple factors (the teacher or tutor, the student, the classmates, the technology, the subject expert) influence the individualisation of learning, the project proposes a holistic approach to learning.

#### **3.2. How it works**

The participants included 134 (2018-2019) and 132 (2019-2020) students, who were offered a total of 14 learning objects. Each object has a different weight in the assessment according to the relationship between difficulty and time needed to complete the activity.

The participants receive information about the learning objects, as well as the rules of the itinerary:

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<sup>1</sup> The aim is to provide tools for students for analysing the digital society in which they are living. They are critically reflecting about the use of digital technology into context.

- There is not a maximum number of objects to be done.
- The minimum is one object for each typology.

To help in the itinerary selection process, students answer an initial questionnaire about their digital literacy, as well as their SRL (self-regulated learning) level. According to their answers, students automatically receive recommendations about which objects they should choose or discard. Then, students pre-select their itinerary, which will be agreed with their teacher-tutor.

Students work from two digital environments:

- The repository of learning objects that are offered by the tutors, classified into five typologies: case study seminars, digital workshops, conference attendance, symposium participation and academic paper writing.
- The Personal Learning Environment (PLE) of each student: composed of the objects of their itinerary, enriched by the tools, contents and environments offered by the subject, and that is useful to student's learning (Figure 1).



FIGURE 1: PLE was based on Symbaloo as well as the LMS environment.

The assessment is carried out through the “Edublocs Grade Book” (EGB), which allows the constant recording of the assessments. For its daily management, the app Technology-Enhanced Assessment (TEA) was designed (Figure 2). Assessments are introduced and managed in this app by the teachers and then sent to the EGB.

TEA allows the management of the assessments and the relationship between teachers and students. All exchanges: mailings, itinerary objects, changes, and information of interest are recorded.



FIGURE 2: TEA was developed with LiveCode, as a shared App.

The results are incorporated into the blockchain system securely and anonymously. Each student, at any time, can consult their assessment in relation to the other students’ assessment (transparent, public and

anonymous information). The perception of individual effort results is contrasted with the reality of the group. This allows making decisions about the itineraries themselves (modify them if necessary, during the course) as well as the quality of the work carried out.

### **3.3. Participants and roles**

The Edublocs project involves three types of actors with different roles and needs: teachers-tutors, trainers, and students.

#### **Teacher-tutors**

They are responsible for the subject and a group (or several) of students. They are the profile that in a traditional teaching system would be called 'the teacher' of the subject. Their function is to define the teaching plan for the subject and, therefore, to design and select the various learning objects to be offered, as well as the teachers who will teach them (trainers). They are the reference point for the students in their group concerning the learning process, the selection of learning objects and the general monitoring of the subject. They are responsible for carrying out the final assessment of each student, with a holistic view, beyond the specific qualifications of the learning objects made.

#### **Trainers**

They focus their work on a specific learning object. In some cases, this may coincide with being a teacher-tutor. Their function is to facilitate the learning of a learning object at a specific time. They offer a clear guide to the objectives, content, and tasks to be carried out so that students can choose the object by knowing it in detail. Therefore, they are 'the teacher' of that object; they guide the students, give them support through tutorship, establish the assessment system and, finally, assess the learning object.

## **Students**

They are at the centre of the Edublocs project. Their role is to make the most of the learning possibilities offered to them, beyond the final assessment/qualification. They must choose their personalised learning itinerary, as explained above. At all times they know (thanks to blockchain technology) their learning situation in relation to their peers. In addition to the learning objects, for which they will be assessed, they are invited to participate in the other learning objects, to complement their training. They must work in collaboration with teachers-tutors and trainers.

With teachers-tutors, they establish their learning itinerary. They are the point of reference throughout the course, to whom they should address their questions regarding the evolution of their learning, to agree on changes in the learning itinerary, to comment on aspects of the pedagogical structure of the Edublocs project or the comparative consultation of their assessment in the blockchain system.

Students work with trainers on the content and projects of a specific learning object. Their relationship is limited in time. Doubts, comments, and tutorials related to a learning object will always be addressed to the trainer, who will finally assess the work done.

With classmates, a collaborative learning network is established. Each student's classmates change with each learning object. Although there is a difference between individual and group work, they are always encouraged to work together, taking advantage of each other's knowledge and skills, providing mutual support for learning beyond what is offered by the trainer.

## **4. Conclusions**

While a detailed description and conclusions of the project could be found in other publications (e.g., Rivera-Vargas & Lindin, 2019), we signpost, in this chapter, only a few global conclusions:

- Students show a positive perception of individualisation and autonomy in learning. Their opinions, collected through the institutional evaluation system, show higher results than the average at the degree. Other indicators go in the same direction.
- Learning results, academic qualifications, and training transference evaluation reflect better results than with a traditional system, but, at this stage, this is an explainable output from experimental and novelty factors.
- Blockchain technology has shown its potential, with excellent results in terms of liability and privacy. However, the EGB and the Ethereum platform were slow solutions compared with the use of shared datasheets.
- Associated costs are not high, but it is not easy to develop the same approach in the current financial system at public universities.

We see how this kind of technology at the service of pedagogy offers excellent opportunities. The accreditation of skills and knowledge in a system of global learning is seen as an opportunity.

This typology of personalised itineraries could allow a learning open model in which everyone could act as a training provider or training recipient. Moreover, where the legitimacy (relevance, quality) given to the providers would be the scale for identifying the lessons learned as valid for a given context. A competence acquired in a particular learning object could be of high importance, for example, to finding a job.

Edublocs contribute in a transversal way to form digital citizens, capable of creating and managing their digital identity. We consider that using this technology will benefit the students' training and social intervention objectives with a global impact.

A digital proposal applicable at the time of Covid-19, to continue with the educational activity beyond the possibilities of specific institutions or teachers. A global and networked education that does not collapse the system.

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## **EXPLORING THE LANDSCAPE OF POSTGRADUATE SUPERVISION IN THE UK**

**ABSTRACT:** This chapter offers a critical account of teaching and learning experiences in UK Higher Education postgraduate research supervision. In doing so, it explores how this landscape is constructed and perceived, and problematizes the significance of rigour in supervision. Many of the day-to-day procedural matters of postgraduate supervision seem to be a matter of policy but tend to be established by convention and enacted at a local subjective level. So, while we might find rigour in espoused institutional policies, the enacted practice of supervision is less constrained. In illustrating this, a personal reflection of the journey through the postgraduate landscape is offered that exoticizes the domestic by presenting an ‘outsider’ perspective. This chapter explores the espoused-enacted dynamic and examines how the landscape of postgraduate supervision in the UK has been developed from routine, tradition and precedent. In this way the process of becoming a postgraduate supervisor at master’s and doctorate level is as much about learning the ‘ways’ of supervision as it is about learning the processes and policies.

**Keywords:** bricolage, postgraduate supervision, espoused, enacted, chinese doctoral students

### **1. The UK Higher Education Landscape as Bricolage**

In exploring the landscape of postgraduate supervision in the UK it is important to recognise that there is no one unified UK Higher Education landscape. Like many other landscapes there is no homogenous geography – rather there is a landscape that is made up of component parts, many

of which are historical, social and political. The United Kingdom of Great Britain and Northern Ireland (commonly known as the UK) is made up of four constituent countries: Scotland, England, Wales, and Northern Ireland. There is a central UK Government, but many powers are devolved to the national assemblies of Scotland, Wales and Northern Ireland. There are three different systems of law – Scotland, Northern Ireland and England/Wales. Education, including Higher Education, is also a devolved matter with different rules, structures and oversight. Further, within each of the four nations, universities have much autonomy, so what happens in one university should not be taken to be a national norm.

This historic-social background has created a devolved university system with key decisions being made at the local level. There is some ‘sameness’ in the system due to legal and policy frameworks and this means that institutions are recognisable as being of the same order, so the organisation and enactment of activities such as postgraduate supervision are not fundamentally different in each institution – but they are different. Tinkler and Jackson (2000) found that “although there is a large degree of inter-institutional consistency regarding key criteria for the PhD award, close inspection of institutional policy suggests that the PhD examination is in fact conceptualized and operationalized in diverse ways” (p.179). Keating (2005) locates this diversity in the ‘lack of a true federal principle and the absence of a federal arena of policy debate’ (p.434); something that has created an ‘asymmetric’ relationship between the four constituent countries and the universities located within them.

This is not to say that there is no governance – there is a great deal of governance. It is only to say that Higher Education in the UK is often influenced by tradition and precedent. Some of the clearest direction on Higher Education in the UK comes from the ‘Revised UK Quality Code for Higher Education’ (QAA, 2018a). Known simply as ‘the Quality Code’, this outlines what is sound practice across all aspects of UK Higher Education without prescribing how this should be enacted. It is a set of guiding principles, expectation and indicators that individual institutions put in to practice locally. In this regard, what is deemed to be sound practice

is only broadly defined and Chapter B11 of the Quality Code, the section that deals specifically with research degrees, reports that these indicators of sound practice “are not designed to be used as a checklist they are intended to help providers reflect on and develop their regulations, procedures and practices” (QAA, 2018b, p.1).

The Quality Code is managed by the Quality Assurance Agency but it is developed in partnership with experts from across the UK Higher Education sector – drawing out and distilling a wide range of voices. Meaning the definition of ‘sound practice’ is based on a number of perspectives and this definition will change as these voices change. Thus, defining sound practice in UK Higher Education is a matter of collaboration and consent. The act of research supervision also tends towards a model of consent and tradition. This is akin to other aspects of life in the UK – such as policing and politics. Policing in the UK is derived ‘almost exclusively from public co-operation with the police’ (Reith, 1956, p.140). Likewise, while there are clear guidelines about what happens in parliament, most of this is drawn from convention and established procedure rather than specific regulation. When we relate these factors to Higher Education, and in particular postgraduate supervision in UK Higher Education, we find that the activity of being a supervisor is one based on collaboration, mediation and communication.

Supervisory development and training are now common in UK Higher Education (Metcalf, et al., 2002); however, there is no clear characterisation of the notion of supervisory excellence (McCulloch, et al., 2016). For Lee (2010), “much of the literature about doctoral supervision has concentrated on describing the ever-lengthening lists of functions that must be carried out” (p.18) such that institutions are likely to have policies and procedures in place, but these tend to focus on the logistics of supervision (the number and frequency of tutorials; how tutorial outcomes are recorded; the procedures for submission; dates, durations and deadlines). Nevertheless, the actual practice of supervision is varied and loosely regulated. Thus, the concept of rigour is a tricky one. Whilst we might find rigour in the espoused policy, the enacted practice of supervision is less constrained. The UK Council for Graduate Education has worked

to overcome this through the production of the ‘The Good Supervisory Practice Framework’ (UKCGE, 2019) and through its ‘Research Supervision Recognition Programme’. The framework outlines ten criteria that define good practice but gaining recognition is mainly a matter of showing competence against a set of criteria – based on past experience rather than engaging with learning materials in order to enhance current practice.

In total we find that the UK Higher Education system is varied and variable. Much of it is devolved to the four constituent countries. Where there are national bodies, such as the Quality Assurance Agency and the UK Council for Graduate Education, their documentation tends to be the guidance that is developed in collaboration with Higher Education professionals. The expectations and indicators that are offered are locally interpreted by Higher Education institutions who have great autonomy – setting their own policies, standards, grading systems and stages of study. These institutions then develop local guidance for supervision which is then passed to supervisors (sometimes with associated training and sometimes without any training). Individual supervisors then enact their own version of supervision.

Bricolage is the process of constructing one thing from a range of other things, and the bricoleur is the person who uses whatever tools are at their disposal even if they have “not been especially conceived with an eye to the operation for which they are to be used” (Derrida, 1978, p.285). Conceptually this means using whatever is at hand to create appropriate and useful “strategies as they are needed in the unfolding context” (Kincheloe, 2005, p.324). Thus, ‘bricolage’ is a useful term to describe postgraduate supervision in the UK – as interwoven strands of different countries, different institutions and different supervisor perspectives are placed together by supervisors creating “a pieced-together set of representations that is fitted to the specific of a complex situation” (Denzin & Lincoln, 2008, p.5). Postgraduate supervision in the UK is not simply a bricolage of frameworks – it is a bricolage within a bricolage within a bricolage.

## 2. Espoused and Enacted Practices

Internationally there is a great deal of literature on what might be deemed to be 'best practice' in postgraduate supervision. Much of this work has focussed on supervisors examining their practice through critical reflection (Pearson & Kayrooz, 2004); examining levels of competence (Nulty, et al., 2009), or through developing maps (Grant, 2003), guides (Cooper & Forrest, 2009) and toolkits (van Schalkwyk, et al., 2016). Similarly, literature within the UK offers various proposals to enhance postgraduate supervision, including acting on student feedback (Johnston, et al., 2016); developing shared meaning and common understanding of what supervision might entail (Hallett, 2010), and developing interpersonal skills to support the early stages of supervision (Brown, 2003); however, there is no clear evidence that researchers engage with these programmes or actually learn much during these programmes (Brew & Peseta, 2004). Overall, whilst there is a great deal of literature on the need for the development of supervisors and many tools have been suggested, there is no clear evidence of the impact of these approaches. Thus, espoused guidance is vague or suggested rather than clear and regulated. Such a situation leaves the act of supervision to be locally defined and locally enacted.

Where there is guidance on the act of postgraduate supervision in the UK these policy documents tend to be monitoring devices rather than outlines on how to be a good supervisor. For example, Chapter B11 of the QAA Quality Code (2018b) offers 18 indicators of sound practice in research degrees in the UK. Indicator 7 is 575 words long and states that 'Higher education providers define and communicate clearly the responsibilities and entitlements of students undertaking research degree programmes'; however, indicator 9 which outlines who should be a supervisor is only 163 words long, and indicator 12 which covers the need to give supervisors adequate time to carry out their responsibilities is only 159 words long. Clearly quantity of words is in itself not a measure of the quality of guidance offered, but it does suggest that where there is guidance on postgraduate supervision this tends to focus on institutional

requirements and the formal aspects of doctoral supervision rather than the tools of engagement, interaction and support (Whitelock, et al., 2008). These documents are written with the intention of enhancing practice but “tend to the notion of a ‘thou shall do’ doctrine” (Grant, et al., 2014, p.48).

Postgraduate students experience a process of enculturation (Pearson & Brew, 2002). This is most likely the result of their interaction with their supervisor, and students are unlikely to be aware of local and national frameworks for quality control. As a way of understanding the enculturation of supervision, Doloriert, Sambrook and Stewart (2012) offer five thematic perspectives on the relationship between the postgraduate student and their supervisor. Their first theme, ‘technical/social support’ relates to the way in which supervisors feel they are responsible for monitoring the academic progress of their students and for developing a rapport with them. The second theme, ‘student/supervisor relationships’ explores the working relationship between the student and their supervisor, particularly their levels of closeness and social interaction. The way in which supervisors and students variously consider their levels of personal agency is explored in the third theme, ‘power’. The fourth theme, ‘emotion and emotional intelligence’ considers how attuned supervisors are to the needs of their students. The final theme, ‘power and emotion of feedback’ looks at the manner in which supervisors give feedback and their perceived purpose in offering such feedback.

Grant, Hackney and Edgar (2014) report that “the most important ingredient in successful postgraduate supervision [is] not solely being a scholar in the field but building an effective professional relationship with the student” (p.57); however, the significance of effective professional relations seems to have been reduced by the increased institutional pressure to monitor and report on student progress (Whitelock, et al., 2008). For Park (2005) postgraduate study “has traditionally been viewed as a form of academic apprenticeship, and training inevitably has a part to play in producing the well-rounded academic practitioner” (p.193); however, there are questions about equity when postgraduate study does not take place in a unified system but is dependent on individual and locally enacted practice. This means that the espoused policies that are created

to guide the development of postgraduate students are usually filtered by supervisors such that students only see supervision as an enacted activity. Within a Higher Education landscape that is formed by convention; where policy is focussed on meeting targets and checking progress, and supervisors lack training in the interpersonal aspects of supervision, it is fair to question the rigour of the postgraduate experience.

As different nations and different Higher Education institutions in the UK have different perspectives, the concept of what constitutes good postgraduate supervision becomes problematic. We see clear evidence of this in the work of Abiddin (2007) – who looked at 40 UK universities and found 40 different policies that were intended to guide supervisory practice. Clearly there is no single policy that can address the bricolage of UK Higher Education and even local institutional policies are examined and understood differently by individual supervisors. In a context where there is no agreed upon ‘right’ way of doing things this means that there is built-in tension between espoused and enacted supervisory practices. In this environment it seems more fruitful to discuss stylistic differences than to try to explore what ‘best practice’ might be and this may be one of the reasons why the literature on postgraduate supervision in the UK has tended to focus on the function and process of supervision (Fenge, 2012).

### **3. Supervision in Practice**

Bourdieu (1988) suggests that to understand a familiar academic situation we should attempt to stand to one side of what we know and experience and attempt to exoticize the domestic. One way of doing this is to examine an objective situation through a new cultural lens. According to the Higher Education Statistics Agency in the academic year 2018/19 there were 585,730 postgraduate students in the UK (HESA, 2020). Of these, 217,255 (37%) were overseas students with Chinese students making up the biggest single national grouping. Here, as a means of understanding how postgraduate supervision is actually experienced, we offer a reflective account of one Chinese PhD student. This personal reflection is not

offered as a global and generalisable truth but as an exemplar of the journey through the postgraduate landscape and is structured around Doloriert, Sambrook and Stewart's (2012) five thematic perspectives on the relationship between the postgraduate student and their supervisor.

### **3.1. A Personal Reflection**

Foreign students seem to suffer from the conflict of educational philosophy between their mother country and the UK. In my country, China, teachers are perceived as the core of education and what teachers say is normally perceived as absolutely correct. This culture shapes students' learning habits such that they do not tend to challenge their teachers. In addition, in Chinese examinations, each question has one standardised correct answer, so Chinese students are not encouraged to think critically or to critique the standardised answer. These two features shape Chinese students so that they expect their supervisors to give them a clear research question; a clear research procedure, and they believe their supervisors' words without challenge. Sometimes, Chinese students may complain about their supervisors not giving them clear guidance, but in fact this is because their supervisors give their open guidance whilst they expect their supervisors to give them the standardised correct answer to every problem they encounter. For foreign students, supervision in the UK takes a lot of getting used to.

#### **3.1.1. Technical Support**

Chinese students expect step-by-step guidance from their supervisors. Higher Education has developed quickly in China, but actually 'doing' academic research is still a relatively new thing. Academic research is still not that rigorously conducted in China, so the academic skills of a first-year Chinese PhD student are not the same as that of the first-year UK PhD student. However, UK supervisors assume that all students have

the same academic foundation and supervise them all in the same way. So, studying in the UK means that the plan for getting your PhD is quite clear but the guidance from supervisors is not very individual and can be difficult to follow. Different cultural expectations regarding feedback and support mean that postgraduate students can feel frustrated and anxious. I received different types of reactions. At the start of my studies my supervisor was clear that she did not agree with my original research plan, so I changed my project. Later on, when my supervisor gave me feedback it was much softer. It was really positive, but her feedback was just too soft – so I didn't feel supported, I just felt she was being encouraging. For example, she would say “this part needs revision” or “think about this again”, which was confusing to me and I did not know what she meant. It was better to give me more direct comment on HOW to revise and WHAT should I take into consideration. Direct and straight comments are more effective for Chinese students but the approach in the UK is that supervisors try not to say things that will upset you. Perhaps my supervisor was worried about how I would feel if she gave powerful advice, but she did not understand that I was looking for definite answers.

### **3.1.2. Student/Supervisor Relationships and Social Support**

Chinese students expect a close relationship with their supervisors so they can feel part of a community. In China, we have a ‘family culture’ which means we tend to treat people in our social network as a kind of family member but in the UK this does not exist. People in the UK perceive the supervisory process as a formal working relationship. Chinese students normally expect their supervisors to share their personal experience and life story with them just like Chinese teachers commonly do, but this does not seem to be part of British culture, so Chinese students feel at distance from their supervisors. As a foreign PhD student studying in the UK, I felt like the adopted child of my supervisor in comparison to my English counterparts who were like my supervisor's born children. This is understandable since local students can commu-

nicate better with their supervisors. Language barriers also impede the development of relationships. Foreign students may need half a year to adapt to an English-speaking environment, therefore their communication with their supervisor may be ineffective during the first six months, which may cause problems for their future study. Universities in the UK require their PhD candidates to have a score of more than 6.5 on the International English Language Testing System (IELTS) but fulfilling this language requirement does not mean that these students can effectively communicate with their supervisors since proficiency in English does not necessarily mean proficiency in learning in English. This means that supervisors can overestimate their foreign students' English language ability (since they know their students have passed the IELTS test). These cultural expectations and language barriers mean that it can be very hard for foreign students to feel close to British postgraduate supervisors.

### **3.1.3. Power**

There is a conflict between a supervisor's expectation of a postgraduate student and the student's own expectations. Chinese PhD students expect to have publications before graduation, but UK supervisors expect students to focus on doing meaningful research rather than spending effort on writing journal articles. This can cause tension as the supervisor is perceived to be correct, but the student's expectation does not go away. This situation can make Chinese students feel helpless because they agree with their supervisor that a high-quality thesis is important but a lack of publications makes them uncompetitive when they look for jobs after graduation. Chinese students need to negotiate with their supervisors and convince their supervisors that their investment in writing journal articles won't interrupt their thesis completion, but it is not always easy for postgraduate students to feel brave enough to do this. Also, it is normal in the UK to have more than one supervisor, but they often have conflicting opinions and suggestions. This situation made me really confused and lost. My second and third supervisor said I should

mainly follow my first supervisor's opinion and their opinion could be treated as a reference – the result of this was that they did not tend to give detailed comments as they did not want to offend the first supervisor. So, the power relationship is not just between the student and the supervisor but also between the supervisors.

#### **3.1.4. Emotion and Emotional Intelligence**

My supervisor was very committed to her role, but she was not interested in my research. She supervised me well but, because she did not show much interest, I did not feel encouraged to deepen my research findings. In general, postgraduate supervisors in the UK seem to care most that their student's research is implementable, practicable and meaningful; they seem to have their own goals and targets that can be more important than any goals their students care about. Because of differences about what is important, supervisors can misunderstand what their foreign students need. Most Chinese students do not want to have an extension of their studies, they expect to graduate on time. But some UK supervisors cannot sense the significance of on-time graduation to Chinese students. These supervisors prioritise the quality and contribution of their students' research and they think the length of PhD study is not a problem, so they would happily suggest their students have an extension in order to do more experiments or revise chapters. These differences meant that my supervisors did not always seem to know how I was feeling, and even when they tried to help, they were not aware of my needs.

#### **3.1.5. Power and Emotion of Feedback**

From my own experience, I think my supervisor knew the rules and the milestones, but the problem was they wanted me to fit in around their schedule and I did not always understand what she was asking of me. So, the structure of my studies was clear, but I did not always feel

supported. My supervisor was busy, and she supervised many students, so we students needed to follow her schedule and arrange supervision when she had time rather than when we needed guidance. This was understandable but the problem was that I could not study for a PhD degree forever: I only had a set amount of time and could not spend too much time waiting for her. In addition, some supervisors in the UK are not prompt in giving their students feedback, which means students waste a lot of time waiting. In China, it is important to be prompt and thoughtful. Chinese students perceive that pushing supervisors for feedback will cause a tense or unhappy relationship with their supervisors, and they are afraid that this unhappy relationship may mean their supervisor does not give proper supervision, so most Chinese students choose to wait impatiently. Overall, my experience is that supervisors are powerful about what you should do and how you should do it, but they worry that their feedback will upset you.

#### **4. Supervision in Practice**

Understanding postgraduate supervision in the UK is about understanding how culture, tradition and bricolage have created an environment where the enacted 'way' of supervision is not always aligned to the espoused institutional documentation and, as our personal reflection shows, does not always meet the needs of students who are unfamiliar with local customs. In the arena of postgraduate supervision, many of the day-to-day procedural matters have been established by convention rather than policy. Universities are likely to have policies and procedures in place that are focussed on the logistics of supervision (the number and frequency of tutorials; how tutorial outcomes are recorded; the procedures for submission; dates, durations and deadlines); however, the actual practice of supervision in the UK is varied and broadly unexamined.

The purpose of postgraduate supervision is to steer, guide and support students through the processes of research (Doloriert, et al., 2012);

however, the traditional model is now being challenged by a growing diversity of postgraduate degrees in the UK, and this may mean that the processes of supervision have to change (Park, 2005). But change can be difficult and Manathunga (2005) reports that the development of postgraduate supervisors “can be problematic for a range of reasons, some of which are peculiar to this particular form of pedagogy; others can be linked to changes in governments’ research higher degree policies, and yet others are related to the epistemological underpinnings of educational development” (p.18). In order to smooth this transition, there needs to be a clearer understanding of the parameters of supervision – outlining both the expectations of good supervisory practice and the boundaries of the local supervisory agency.

#### **4.1. Implications for practice**

This chapter has explored how the landscape of postgraduate supervision in the UK has been developed by routine, tradition and precedent and how the gap between espoused and enacted processes of supervision has led to supervision being a local activity. In an examination of how we might create excellence in the UK postgraduate supervisory environment the answer cannot be to create an objective approach to postgraduate supervision but to truly embrace the localised model. As has been shown, the documentation on postgraduate supervision in UK Higher Education is useful for defining research procedures but not for outlining supervisory practice. Instead of looking to create a national model of supervision, supervisors should focus on the hyper-local aspects of supervision and work to personalise their practice to the particular needs of their individual students. Whether supporting home or international students, this hyper-local practice should involve: (1) knowing each postgraduate student as an individual; (2) structuring direction and feedback in line with each individual’s needs; (3) giving each student appropriate time to settle into their studies; (4) showing an interest in each student’s goals, and (5) sharing dialogue, so that both the supervisor and student are

aware of each other's expectations of success. In this way, the landscape of postgraduate supervision in UK Higher Education will not be enhanced through centralised policy but through personalised rigour.

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## **TEACHING IN HIGHER EDUCATION- CONTEMPORARY INSIGHTS FROM LECTURING AND CASE-BASED METHODS**

**ABSTRACT:** Research in the field of teaching and learning in Higher Education has been gaining prominence around the world. In this context, the pedagogical dimension of teaching has been emphasised, not only by the need to follow the requirements related to the Bologna Process but also by the increasing complexity of the information to be worked on, by the different cultural and public contexts it serves, by contemporary understanding of pedagogy and, as a consequence, by understanding the advantages that learning theories add to the didactization of the content to be taught.

This work aims to contribute to a reflection on the main challenges of the Bologna Process within the pedagogical dynamics of Higher Education. In this context, pedagogical methods to be used are revisited, with respect to teaching-learning scenarios in line with international guidelines based, on the one hand, on the learner's effort and work and, on the other hand, on the reflection about teaching practices that seek to be innovative and sustained in active learning methodologies.

In this regard, the lecturing method is analysed using Ausubel's cognitive theory and also from studies on the topic, allowing new perspectives on the learning processes associated with that method and outlining implications for its use in the practice of teaching. It also presents the contribution of Spiro's theory of cognitive flexibility for the construction of the reflective model and its implications in the design of learning choreographies or scenarios based on the analysis and writing of pedagogical cases.

**Keywords:** Learning theories, Lecturing method, case-based learning, active learning

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## 1. Introduction

Contemporary society, characterised by multiple dynamics and rapid and constant changes, has posed the greatest challenges to people, institutions and, particularly, to schools and educational organisations. New approaches, new learning models, new literacies and ‘new’ educational choreographies are today important dimensions of action that may facilitate the understanding and construction of knowledge by young people.

In the Higher Education sector in Portugal, the Bologna Declaration has put demands in place relevant to the required teaching and learning dynamics, centred therefore on the activity of learners with references for intervention guided by competencies, taking into account the inclusion of ‘new’ social contexts and the sustainability of technological advance as opportunities and support for pedagogical innovation. The university educational processes should therefore incorporate contemporary European norms, seeking to apply the guidelines of contemporary pedagogy in the construction of active, well-founded and critical citizenship, also in digital terms, as well as the social and labour market integration of trainees.

The dynamics of teaching in the modern or post-Bologna period have also been recognised by Ruth Naylor and Yusuf Sayed (2014) as complex, involving the multiplicity of factors influencing teacher quality, among which practices of teaching are indeed included. Understanding, reasoning and examples of good practice with regard to the instructional process are important categories of professional development. Indeed, teacher professional development appears to have an important impact on changes in teacher behaviour and student learning (Wood, et al., 2011).

Educational dynamics in Higher Education are experiencing contemporary dilemmas and challenges. The teaching-learning choreographies that are currently trying to be innovative, based on the activity of students, benefit from considering theories, models and research on learning processes. The basis of pedagogical practices will thus be reinforced and validated by models that are sustained at the level of current research.

In this work, the lecturing method is analysed from different conceptual models and research results, namely the cognitive theory developed by Ausubel, which make it possible to substantiate the educational interest of the aforementioned methods and their associated learning processes, and the implications for their use in teaching practice are outlined. It also presents the contribution that the theories of Dewey and Schon represent for the construction of the reflective model and its implications in the design of learning choreographies based on the analysis and writing up of pedagogical cases.

## **2. Lecturing method: Learning by reception, meaningfully**

At this point, a brief characterisation of the Lecturing method is made, analysing its pedagogical value from the perspective of contemporary learning theories and studies on that method and proposing some strategies for its optimisation.

The Lecturing method has dominated educational practices in Higher Education (Bligh, 2000). Its long past goes back, in the view of some, to training in oratory in Antiquity, and for others, to the development of universities in the Middle Ages. Although the method has been criticised and a subject of controversy and polemics, it is considered synonymous with university teaching and remains one of the most widely used methods in the 21st century (Bligh, 2000).

The general characteristics of the Lecturing method are focused on the importance attributed to the transmission of information, on its oral character, and the predominance of the figure of the teacher. However, this method may also be associated with other educational objectives, for example, understanding information, stimulating interest or developing a critical view of the discipline (Brown & Atkins, 1988).

The Lecturing method can take different forms, which allows its users to be justified for different pedagogical purposes and, in a way, combined with other educational strategies. For example, Laing, as long ago as 1968, considered three types of lectures: didactic, inspired and didactic-

inspired. While in the first type the importance is attributed mainly to the transmission of information, in the inspired type, the objective is to generate enthusiasm for a subject; the didactic-inspired type seeks to combine both objectives (Laing, 1968). Lowman (1995) also proposed a typology of lectures, highlighting that different types of lectures can be used to obtain information but also to promote students' thinking about the content being presented as well as their involvement. In the Expository Lecture the teacher has a prominent role, presenting information most of the time. However other types as Formal Oral Essay, Provocative Lecture, Lecture Discussion, Lecture – Recitation and Lecture Laboratory all aim to implement different ways to involve students.

On the other hand, and according to how the ideas are organised, the Lecturing method can cover different structures, for example, classical, focused on the problem, sequential, comparative, thesis-based (Brown, 1980). The classical structure is considered the most frequent, being characterised by the lecture being divided into a set of main subthemes, which in turn are divided, each into paragraphs, which can be further subdivided into a set of smaller units. However, the lecture can also have a problem-centred structure, allowing an approach to the method with the same designation. When a lecture is organised into a set of related statements which lead to a conclusion, its structure is called a sequential structure. The comparative structure makes a comparison between two or more procedures, themes, theories, while in the thesis structure it starts from a statement, the thesis, that will be proven through a set of arguments (Brown, 1980).

Despite being one of the most widely used teaching methods, the Lecturing method is also one of the most criticised and the controversy surrounding it is not a recent phenomenon. Since the invention of the printing press in the 15th century, the method began to be called into question, as books became more and more accessible and numerous. The criticism is focused on the characteristics of the method itself, as the low level of interaction and the dominant role of the teacher, as well as the extended oral presentations, promoting learning by memorization, students' passivity, and minimizing problem solving or creativity (e.g. Kaur, 2011).

However, despite the criticisms, the Lecturing method has persisted throughout the centuries up to the present, which shows that it must have some educational advantages that have made it so widely used for so long. What follows are conceptual models and studies that have contributed to understanding the pedagogical value of the method, namely the concept of learning by meaningful reception, as proposed by Ausubel, and research focusing on the comparative analysis of the method's effectiveness in relation to others (e.g. Vaz-Rebello & Bruten, 2010).

Within the scope of the cognitive theory developed by Ausubel (Ausubel, et al., 1980; Ausubel, 2000), two independent dimensions of learning are considered: the first concerns the relationship between the content to be learned and the way it is presented to the student, then considering learning by discovery and Learning by reception, this one is the one that is mainly associated to the Lecturing method; the second is related to the student's prior knowledge of the subject and the way s/he will internalise it, in an arbitrary and literal way, thus giving rise to rote learning, or in a non-arbitrary and substantive way, which corresponds to meaningful learning.

The combination of these two dimensions allows the identification of four types of learning – learning by meaningful reception, learning by rote reception, learning by meaningful discovery and learning by rote discovery. In learning by meaningful reception, the concepts, ideas and facts are presented to the student, but are related to the knowledge and ideas s/he already has; the same does not happen in learning by rote reception – here, although the subject is also presented to the student, it does not fit into his or her cognitive structure and so it can only be memorised.

In learning by meaningful discovery, the student “arrives” at knowledge for himself/herself, relating what he/she learned with previous knowledge; in learning by rote discovery, the student, despite reaching a problem by himself/herself, ends up memorizing that solution, without integrating it into his/her cognitive structure (Ausubel, et al., 1980).

Based on the proposed model, Ausubel then considers that Learning by reception is not necessarily rote learning and that learning by meaningful

reception can be an important way for students to acquire knowledge. Thus, he states that learning by meaningful reception is important for education because it is the human mechanism *par excellence* of acquisition and storage of a vast number of ideas and information represented by some field of knowledge (Ausubel, et al., 1980).

In this context, Ausubel's ideas can be considered to contradict the current view that expository teaching is associated with mechanical learning. The main challenges currently facing the Lecturing method are the identification of strategies that promote its educational value. In this sense, the expository class must take into account the nature and conditions of learning by meaningful reception. Following Ausubel (Ausubel, et al., 1980; Ausubel, 2000), the most prominent principle to promote meaningful learning is to take into consideration what the learner already knows. In this scope, Ausubel also proposed two principles for the structuring of subjects – that of progressive differentiation and that of integrative harmonisation. The first principle establishes that the lecturer/ the teacher should start by presenting the most general and abstract ideas of the discipline and then, progressively, differentiate them in terms of details and specificity. The principle of integrative harmonisation considers that new ideas presented to the student must be integrated into content previously learned by the student (Ausubel, et al., 1980).

Another proposal to make learning meaningful concerns the prior use of advance organisers. These were defined as “[...] introductory material with a higher level of abstraction, generality and inclusiveness than the subject to be learned [...]” (Ausubel, 1978, p. 252). The function of the advance organiser is to provide the student with a conceptual framework of reference, allowing the integration of new subjects presented and it can take different forms: it can be an affirmation, a question, a story, an experimental demonstration or a film (Joyce & Weil, 2003).

Following Ausubel's theory, Novak (2002) developed the concept map pedagogical tool as a proposal to promote meaningful learning. It organizes and represents knowledge graphically, aiming to identify concepts and propositions about a topic and the relations between them. Concept

maps can be used when planning, implementing or evaluating a lecture, in order to facilitate meaningful learning.

It is also important to mention that several studies have focused on analysis of the effectiveness of the Lecturing method and comparison with other teaching methods (e.g. Costin, 1972; French & Kennedy, 2017). These studies showed that the different methods are more suitable for certain objectives, and thus the need to relate the effectiveness of the teaching method in terms of the objectives to be achieved has begun to be considered. Questions like – “Which teaching method is most effective?” or “Does the Lecturing method make sense today?” – have no answer unless the objectives sought are specified (e.g. Dunkin, 1983; French & Kennedy, 2017). In this context, the idea of combining different teaching and learning methods is also justified, which points to the need to use various methods depending on objectives, the students and the teacher’s characteristics and the content.

### **3. Case-based method: Learning to think reflexively**

One of the great dilemmas of Higher Education, also felt by students from different areas of knowledge, is focused on the dichotomy between theory and practice. The difficulty of using the theoretical knowledge acquired in most classrooms at the university is all too apparent in professional daily life.

In a (trans)formative process of this nature, that is, one which aims to promote a form of thinking closer to that used by good professionals, one cannot aim to acquire knowledge often not ‘situated’. In a changing society, above all, one should seek to create conditions and situations for learning in a constructivist perspective (Pessoa, et al., 2020) contextualised in practice and reflection.

In ‘situated’ learning, as defined by Stein to *situate* means “*to place thought and action in a specific place and time*”, “*involve other learners, the environment, and the activities to create meaning*”, “*locate in a particular setting the thinking and doing process used by experts*” and

“create the conditions in which participants will experience the complexity and ambiguity of learning in the real world” (1998, p.1). Knowledge is developed or constructed by the situated and continued use of meanings, which implies complex social negotiations. Knowledge is thus dependent on the situations and socially negotiated (Brown, et al., 1989, p. 33). For its development, it is necessary to create conditions, so that the material or content are known in contexts that present challenges such as those found in real-world situations (Stein, 1998). The conceptualisation and organisation of learning environments, adjusted to the construction of knowledge, is therefore fundamental to the learning process. Brown et al. (1989) highlight the role played here by the authenticity of contexts and activities (*authentic activity*), characterised as “*ordinary practices of the culture*” (p. 34), reflecting, accordingly, real ways of using and building knowledge.

The Theory of Cognitive Flexibility by Spiro et al. (1987; 1988, 1990), on the other hand, aims to provide a theoretical framework that integrates the learning of concepts and contexts. It incorporates some of the contributions of Brown et al. (1989) and Lave (1991), in complex and poorly structured domains and at the level of advanced knowledge, on what it is like to learn to ‘think like’; that is, the learning that happens at the level of higher education. Spiro and collaborators argue that, because knowledge has to be used in many ways or because the phenomena of ill-structured domains should be considered as evidencing multiple truths, the emphasis should not be placed on the recovery of intact knowledge structures, but rather on the cognitive flexibility necessary to use knowledge in different situations and contexts. An appropriate set of information or representations should be sought simultaneously, from various sources of knowledge, assembled flexibly, to meet the needs of a particular understanding or the resolution of a particular problem (Spiro et al., 1991a, p. 28), or, to put it another way, considers the contexts of the occurrences.

The development of flexibility requires a new way of learning that privileges: a) *multiple representations* (whether they are analogies, explanations, or dimensions of analysis (Spiro et al., 1987; Spiro & Jehng,

1990, p. 168); b) the development of open representations that are not rigid or closed and c) the multidirectional and non-sequential crossings underlying linear teaching (Spiro et al., 1987; Spiro & Jehng, 1990, p. 168). This new way of learning will allow the best development of the student looking for her/his active participation in a society under construction.

*Learning to think like*, that is, analysing and reflecting on real situations and problems and also actively and flexibly participating in the construction of knowledge, will be the fundamental element in the development of the student, the university student who we want to progressively become a professional of excellence.

*Learning to think like* in a complex and ill structured domain of learning, requires teaching methods that are often the antithesis of those used in simpler domains (Spiro et al., 1988), namely: the contextualisation of learning through activities located in reality, multiple representations related to facts, information to be acquired and the knowledge to be built up, and the presentation of information in a non-linear way, in a structure no longer hierarchical but in a network.

Case-based education may be the necessary way to promote this '*learning to think like*', that is, to facilitate *understanding of the inherent complexity of the learning* required of university students, while promoting critical and reflective thinking. In fact, in Higher Education we are at an advanced stage of learning in which it is intended that student(s) value, understand and know how to apply information, that they know how to think and solve problems that arise in real contexts, complex by their very nature.

Cases are the ideal pedagogical tool for working with students at this level of education and at this stage of learning. It is an active method that is especially effective in the development of professional skills in several areas. And what are the cases in question? Cases are not simply a description of an event or incident. A story to be considered a case, real or hypothetical, needs to have the following characteristics:

- (i) can constitute a context for the application of various statements or theoretical principles;

- (ii) translates one or more particular narratives of events located in a time and situated in a given social and cultural space and context;
- (iii) implies some tension and significant conflict in the domain of the motives for action;
- (iv) can imply and translate some type of reasoning or thinking on the part of the protagonist;
- (v) can promote reflection around the diagnosis of the situation and the possible actions or solutions to be implemented.

Case-based pedagogy (CBP) is an expression of broad scope that covers all types of methodologies in which cases are used in the teaching-learning process (Baeten, et al., 2013; Tomey, 2003) Case-based teaching is no longer *teacher-centred*, but rather *centred on students' activity*. The procedures related to the pedagogical use of the cases will be different depending on whether one chooses Case Analysis or the Case Writing strategy.

*Case Analysis* is used when the aim is to promote the understanding and analysis, guided and grounded, of problems contextualised in real or simulated situations. Individual study can be integrated with collaborative case analysis as well as knowledge sharing supervised by the teacher. The teacher first selects a relevant case and creates the opportunity for the student's individual study. As a second step, group analysis of the case can be planned; this collaborative study can be guided or structured around documents created for this purpose. Finally, there will be an extended sharing and discussion of the reflection under the teacher's supervision.

*Case Writing* is used when the intention is to promote the observation and analysis of problems in everyday life and, through guided writing, to facilitate the creation or construction of knowledge. Thus, in the first phase, the teacher requests the registration of significant problems or incidents; then the opportunity must be given to write the case. This writing can be guided through documents created for each purpose. Finally, there will be extensive sharing and discussion of the work, with the teacher's supervision.

The role of the teacher, in both modalities, will be a *facilitator*, for both individuals and the group, guiding the students in their learning activities. Good orientation of the discussion and reflection on the case is essential, as well as supervision of the analysis and writing of a case. Thus, an in-depth knowledge about the theme and the narrative that it is intended to build will be important. It will also be essential for the teacher to promote dialogue, facilitate the collaborative construction of knowledge, promote good group work dynamics, encourage observation and writing, and help the student(s) mobilise their general and everyday life experiences, reflect and develop critical thinking.

The role of students will be *active* both when writing narratives or cases and in the analysis of cases, individually and in groups. Students should, on the other hand, be available to reflect on their practices and experiences, motivated by field experiences and writing, assuming responsibility for time management and co-responsibility for the development of critical thinking.

#### **4. Final considerations**

In this work we have tried to emphasise the importance of knowing different ways of conceiving the educational process as a fundamental vector of learning. By presenting two different orientations, we facilitate the understanding of different learning choreographies based on different assumptions and capable of being implemented in Higher Education contexts. *Learning by reception, in a meaningful way*, aims to reflect on learning processes underlying the Lecturing method based on contemporary learning theories, in particular, Ausubel's cognitive theory. By distinguishing between how information is 'arrived' at and how it is internalised, the model proposed by Ausubel allows new perspectives on learning reception, showing that it is not necessarily rote learning. The fundamental question then is to make Learning by reception meaningful, with some suggestions being made based on that theory, but also on the results of studies on the Lecturing method itself.

On the other hand, a teaching methodology based on cases is described and substantiated – *Learning to think based on cases, reflexively*; the intention is to integrate theory and practice and situate knowledge in real cases, to support the pedagogical work of the teacher and promote the construction of environments sustained in students' active learning. Spiro's contributions regarding the importance given to the contextualisation of learning and the centrality of cases in the formative process are highlighted and his contribution to the design of teaching-learning paths is made explicit. Case-based learning helps to conceptually perceive the role of students' activity in the construction of knowledge, allowing those who develop training programmes to reflect on the space that should be given to content, students, context and pedagogy.

The design of new teaching-learning scenarios or choreographies, based on these methodologies, as they imply the role of the teacher as a facilitator and advisor and a more active and critical role for the student, represents an added value for the implementation of the principles underlying the Bologna process.

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## **LEARNER-CENTRED TEACHING AT THE FACULTY OF EDUCATION, MASARYK UNIVERSITY BRNO**

**ABSTRACT:** This chapter deals with learner-centred teaching (LCT), which is a preferred teaching strategy worldwide. LCT can bring a significant impact on students, but it is exceedingly important to understand the new roles that teachers and students play in this educational approach. Qualitatively innovative relationships between teachers and students are created to improve students' learning process. The university teachers encourage students to become active learners and their role changes from "teachers" to "facilitators or mentors". The teacher role consists of facilitating student acquisition of crucial course concepts while the student's personal development and attitude head towards the learning improvement.

In this chapter, learner-centred teaching is presented from two points of view. The first view is a teaching method used in higher education in the course Didactics of Natural Science, taught at the Faculty of Education, Masaryk University. The other one is an implementation of this educational approach in school practices by students (teacher candidates) – participants of this course.

The research findings connected with the effectiveness of innovative strategies are represented in this text. The core of the chapter is the description of experience with LCT at the Faculty of Education, Masaryk University, which can be used as a verified example of effective practice at other universities.

**Keywords:** learner-centred teaching, the new role of teachers and students, model of effective higher education.

### **1. Theoretical Fundamentals of Learner-centred Teaching**

The learner-centred educational methodology represents an instructional philosophy that moves from the core elements of teaching and learning in the traditional teacher-centred approach. Regarding a new educational paradigm for the twenty-first century, there has been significant changes in teacher-student relationships. These developed connections between

teachers and students create a suitable environment for the improvement in the learning process of students and the achievement of the required educational outcomes.

University teachers encourage students to become active learners and their role changes from “teachers” to “facilitators or mentors”. The teacher role consists of facilitating student acquisition of crucial course concepts while the student’s personal development and attitude head towards the learning improvement. Also, the student role has evolved from passive receivers of knowledge to “active participants in learning and co-constructors of knowledge” (Meece, 2003, p.111). LCT supports educators to put the learning of students at the centre of the educational process.

As Weimer (2013) and Greer et al. (2010) pointed out, building a new LCT relationship requires educators to work in collaboration with students aiming to identify needs and learning goals. Even though many educators support the empowerment of students’ position, not all teachers and not all students, agree with this instructional approach. This attitude may indicate a teacher-centred mindset stemming from traditional teaching practice, despite their proclamation about implementing the LCT approach.

Research findings (Greer et al., 2010; Weimer, 2013; Wei Li, 2016) indicate that changing from teacher-centred learning to LCT often provokes resistance. Greer et al. (2010) argued that the teacher’s resistance may be demonstrated in direct opposition. This attitude is usually manifested in the form of educational practices which do not support LCT. The inability of teachers to change such practices seems to be the most significant barrier. Furthermore, the research findings (Weimer, 2013) indicate that some students do not accept a change in the traditional teaching-learning approach because of misunderstanding, unfamiliarity, and uncertainty about an innovative teaching method (Weimer, 2013; Wei Li, 2016).

According to the research findings (Weimer, 2013), LCT has a significant impact on students. Therefore, it is necessary to understand the new roles of teachers and students in the classroom. To develop the students’ learning, Weimer (2013) suggests considering five key changes in the educational process, which can progress LCT. These changes are

the role of the teacher, the balance of power, the function of content, the responsibility for learning and evaluation purpose and processes (Weimer, 2013). All of them are described in more detail below; also, they are illustrated in Figure 1.

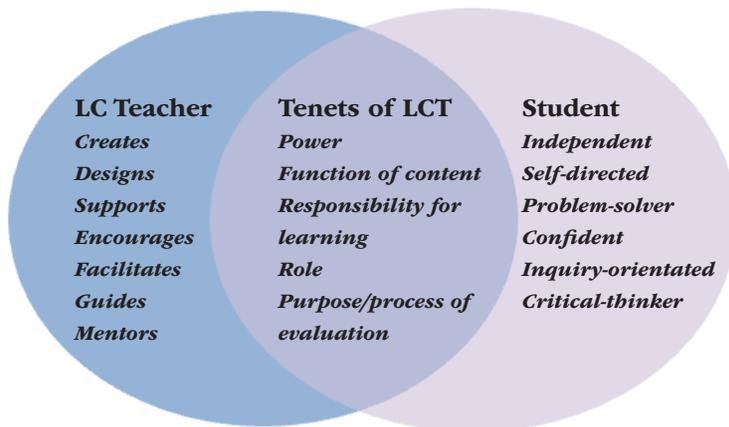


FIGURE 1. Learner-centred teaching (source Weimer, 2013)

### 1.1. The Role of the Teacher

The importance of teachers in education is widely recognised. It is, therefore, understandable that it plays an essential role in LCT. The necessity of the role of the teacher is apparent as well in the list of 5 key changes stated by Weimer (2013). In the first edition of the author's book (Weimer, 2002), the role of the teacher was listed as the third in the order of key changes; nevertheless, in the second edition, the author mentions this factor as the first one. Weimer justifies this move by saying that the change in the role of the teacher is central to the transformation of traditional teaching in LCT, as can be seen from the citation below.

And I start here because changing the role of the teacher is central and significant. I'm not sure that it's the first thing that needs to change. But the other changes cannot be executed if the role of the teacher stays the same. It's significant because although this change may be easy to accept intellectually, most of us have discovered practicing facilitation in the classroom is

anything but simple. It presents teachers with an ongoing set of challenges. (Weimer, 2013, p.24)

For changing the role of the teacher, it is necessary to realise what roles every teacher takes in various educational situations and how and why to understand what should be changed. Traditional teaching is characterised by the fact that most instructional practice still depends on teacher action. The teacher permanently decides what students should do and know. This process metaphorically enables to define the teacher as being in the role of a transporter of educational content and the student in the role of a passive recipient who cannot influence the educational process (Weimer, 2002). However, this way of teaching does not promote learning because the hard work of learning can be done only by students.

On the other hand, the acquisition of knowledge can support facilitating – the role of teachers shifts from being a teacher to facilitator encouraging students to become active learners. The teaching approach moves from teacher-centred teaching into learner-centred teaching. The student and his/her needs move to the centre of interest. Dynamic relationships between teachers and students are particularly effective to promote student learning and personal growth. From this perspective, groups of students mutually collaborate with their teachers to master the body of information. Teachers facilitate students' acquisition of key concepts, but they do so to enhance students' personal development and attitudes toward learning.

## **1.2. The Balance of Power**

This change is closely related to the role of the teacher. The transformation of the dominant teacher role is associated with the difference in the distribution of power. Teachers wield decision-making power, which means that they bear the responsibility for the control of the instructional process. In short, teachers determine WHAT, WHEN, WHERE and HOW students will study. Nevertheless, it depends on students to decide

whether they will learn, as has already been mentioned, teachers teach, and students learn.

It might seem that the decisive factor in this measurement of “power” is the student who decides whether to learn or not. However, even if the teacher cannot guarantee the learning outcome, s/he can have a positive impact on a student’s motivation to learn. The teacher prompts his/her students in multiple ways, and one of the effective options confirmed by research findings (Greer et al., 2010; Weimer, 2013; Wei Li, 2016) is to transfer some power in the learning process to students. The teacher chooses strategies that allow students to choose WHAT, WHEN, WHERE and HOW they will learn. The degree of decision-making depends on the students’ ability to deal with that responsibility. Teachers should help the students to reflect, and in this way, let them manage their learning process; it cannot be done all at once without training.

Balance of power should be understood as sharing; the teacher and the students cooperate; they do not compete or fight. By implication, teachers control less, but students are involved more. A good example could be allowing students to assign choices and policy setting (Weimer, 2013).

### **1.3. The Responsibility for Learning**

The responsibility coheres with the balance of power. If a student participates in decision-making, he/she must also take responsibility for his/her decisions. Therefore, the teacher must monitor whether the students accept a relevant part of their responsiveness within balancing the power. There is a ratio between the share of power and the degree of responsibility. The higher the decision-making rate is, the higher the responsibility goes.

The teacher can never transfer all the responsibility to the student. As the teacher’s professional status determines his/her responsibility for educational outcomes, and he/she cannot delegate it to anyone else. Moreover, it is essential to keep the power and responsibility in balance. The student’s share responsibility is related to his/her mental develop-

ment and abilities. Accordingly, the teacher must be able to determine what part of the responsibility the student is ready to take on. Students need guidance and support to assume this responsibility gradually. Being responsible students means being aware of the consequences of their acts, and bearing on the potential decisions, knowing that it was their choice, and learning from their mistakes. It is possible to talk about the skill to make responsible decisions based on critical thinking. This skill is crucial not only for education but for everyday life.

Currently, universities usually “emphasise” passive learning over active learning. The environment at universities primarily causes this, for instance, by the organisation of study, course syllabi, instructional strategies, attitudes of teachers, and the learning spaces. In the beginning, universities with students must create a learning environment that motivates students to accept responsibility for their learning.

The actual issue is that teachers and students are dependent on external motivations. Students learn because of point grading systems, and this is why it is necessary to change this motivation. However, most students are not interested in shifting from their passivity to an active role, and taking the learning initiative. They keep a negative attitude to LCT, which is necessary to change.

Learner-centred education allows students to experience the consequences of their decisions in learning and contributes to evolving external motivations to internal motivations. For a student to successfully assume the learning responsibility, the teacher support is hugely beneficial. Under the teacher’s guidance, students experience satisfaction from autonomous learning, the teacher mediates the education process and leads students to better learning outcomes. When students become more independent, they require less guidance.

#### **1.4. The Function of Content**

Traditional university education is primarily concentrated on educational content. It sometimes shows that the essential purpose of university

education is to transfer knowledge. The student is a passive recipient of knowledge, and he/she is focused on the teacher, more precisely on the content to be transferred, which is usually very extensive and demanding at the university level. Following this idea, teachers tend to transmit as much information as possible. Nevertheless, they often overlook one essential participant in the educational process – the student who is required to master the information. However, this demands students' active participation in the educational process. Due to the critical function of content delivery for teachers, it stands as the most potent barrier for changes to make teaching more learner-centred.

Teachers have a considerable amount of content to teach, and if students are not engaged in new and unfamiliar materials, they do not acquire knowledge efficiently. Learner-centred lessons still contain plenty of educational content; however, teachers use meaningful educational materials and strategies to support students' active learning. Also, they use content to enhance the learning skills which students will need across a lifetime of learning. Equipping students with learning skills enables them to study by themselves, sometimes during and regularly after a lesson. Thus, in LCT, the way content is mastered is more critical than the amount of implemented content. Students learn to study effectively, to independently search for the right information and apply it to new contexts.

In terms of student motivation, students need to consider the taught content relevant to their lives. If a student does not find the curriculum useful, he/she learns it only to meet the exam requirements and not to build meaningful knowledge. It is not easy to design a quality curriculum that meets the needs of employers and the required professional competencies; the needs of students for authentic learning, and to connect theory with practice. Besides, it is necessary to realise that students are getting ready for their future profession and simultaneously to cope with the fast development in the knowledge society. Therefore, it is crucial to move from the traditional way of teaching focused on the mere transfer of content to student-centred learning, which supports the development of students as independent, self-directed, and self-regulated learners, and prepare them for lifelong learning. Content should be used to build

up a knowledge base and to strengthen learning skills and learning self-awareness. By implication, teachers spend less time transmitting the required content and students spend more time in active learning activities.

### **1.5. Assessment Purpose and Processes**

Student assessment is a complex activity for teachers. There are many factors to consider. The major ones are WHY, WHO, and HOW to assess student's learning. For this purpose, teachers commonly assess the outcomes of students for two reasons. Firstly, they have a professional obligation to certify the achievement of the learning outcomes; it is called a summative assessment. This type of assessment predominates in teacher-centred learning. Teachers aim to determine the results of students' activity. Secondly, teachers also use assessment activities for helping students to progress in their learning. In this case, it is a formative assessment. By its very nature, LCT supports this type of evaluation. The goal of a learner-centred teacher is to maximise the learning potential as a part of any experience where students create a product, perform a skill, or demonstrate their knowledge.

There is another significant factor which is WHO evaluates and WHAT PERSON is evaluated. In the university environment, it is usually a teacher who assesses the work of the students. Peer-assessment or self-assessment remains uncommon in the current education. Besides, students providing an evaluation of their teachers remains a rare practice as well. Concerning the transformation of a traditional teacher role, the peer-assessment or self-assessment comes into practice. In the concept of LCT, in particular, self-assessment is associated with transferring the responsibility to students for independent learning. If a student is supposed to be successful in the autonomous process of learning, he/she needs to master self-evaluation.

Regarding the processes of assessment, students have a deficit of opportunities or even a lack of agency, and they have to develop self-assessment and peer-assessment skills. Since grades play such an essential part of education, teachers are obliged to classify student work. However,

mature learners develop self-assessment skills and can provide others with constructive feedback (peer-assessment). Learner-centred teachers design learning experiences that give students the opportunities to explore and develop these essential skills, and they seek out strategies and approaches that do not compromise the integrity of the assessment process.

## 2. Importance of learner-centred teaching at the Faculty of Education

The framework LCT is significant for all education types. Based on the research studies mentioned above (Meece, 2003; Greer et al., 2010; Wei Li, 2016; Weimer, 2013), it motivates students to achieve desired educational outcomes effectively. In higher education preparing future teachers, the concept of LCT has an essential role. The teacher applicants will be likely to implement LCT in their future practice (classroom practice). According to several researchers (Pajares, 1992; Powers, et al., 2006; Samuelowicz & Bain, 2001), the teaching style of teachers is strongly affected by their experience from their school years and their educational beliefs. Also, to understand the need for a significant change in the education, the teacher applicants must see its effectiveness, as experts confirm “The most significant changes in teacher attitude and beliefs come after they begin using a new practice successfully and see changes in student learning” (Guskey, 1986, p.7).

The way for teachers to accept the necessary changes in their teaching is presented in a model diagram of teacher change (see Figure 2) proposed by Guckey.

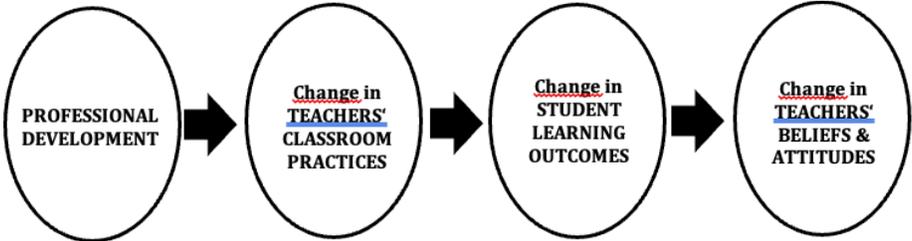


FIGURE 2. A model of teacher change (source Guckey, 1986)

In the Czech Republic, the LCT approach is relatively new, and older teachers certainly have not had the chance to experience it, and students of the Faculty of Education only on rare occasions. For that reason, it is crucial to put education into practice for teachers with CPD and teacher applicants so that they experience a learner-centred approach in their learning journey. In the following section of this chapter, the author focuses on presenting the training of teacher applicants for teaching science subjects from the theoretical view to the description of teaching methods in a particular subject at the Faculty of Education, and on systematising the research conducted around the implementation of LCT methods in pre-service teacher training at the Faculty of Education.

### **3. Learner-centred Teaching at the Faculty of Education, Masaryk University**

Teachers are a significant factor affecting pupils' learning outcomes (Darling-Hammond, 2000; Osborne & Dillon, 2008). Therefore, it is crucial to pay attention to their education, beginning in pre-service education and ongoing throughout their continuous professional development (hereafter CPD). It is necessary to educate them on how to carry out the instruction to satisfy pupil requirements for linking teaching/learning to everyday life.

Teachers take part in the Czech educational system in five possible roles: *teacher as a learner*, *teacher as a teacher*, *teacher as a reflective practitioner*, *teacher as a leader* and *teacher as a researcher*. The role of *teacher-learner* is typical for university students (pre-service teachers). This role is often underestimated and neglected during CPD; however, it is vital. According to experts, teachers are strongly influenced by their own school experience as learners, and many teachers have minimum experience with innovative educational strategies from their schooling.

The role of *teacher-teacher* relates to the teacher's classroom practice, and university students (pre-service teachers) go through this role during teacher training at schools. The role of the teacher-reflective practitioner

is based on experience, and it is expected within CPD. Teacher-leader is involved in teacher training management. Experienced teachers or education specialists (e.g., an expert in didactics, educationalist) usually fulfill this role. The role of teacher-researcher has gained importance recently based on the popularity of research in this field. Researchers from our University have been engaging in-service teachers (some pre-service teachers as well) in action research as much as possible. It is beneficial for both sides – university experts and teachers.

Teachers' professional competencies are created through these five roles. In each role, teachers acquire specific required knowledge and skills, and their linking are necessary conditions for a quality teacher education. At our faculty, this model has proved its worth, especially in pre-service and in-service teacher education in innovative educational methods and classroom practice.

Change of teaching is generally a slow process given the complex nature of the educational process. In the Czech Republic, many education institutions try to move from teacher-centred teaching in the classroom to a more learner-centred teaching environment. This process has gained advocates but also opponents, and due to the lack of guidelines provided and teachers' experience, it has been progressing slowly. It is urgent to share an example of good practice with LCT to help transforming the classroom practice.

### **3.1. The Course Didactics of Natural Sciences: an example Learner-Centred Teaching**

In the Czech Republic, pre-service teachers are educated in two separate subjects of their choice, and interdisciplinary instruction is not involved in the university curriculum. However, the current interdisciplinary paradigm of natural science education requires an integrated approach. The Faculty of Education at Masaryk University in Brno is solving this deficiency in the pre-service teacher education by establishing the course Didactics of Natural Sciences Subjects, which aims at interdisciplinary

instruction. Students (teacher-candidates) acquire educational strategies appropriate for interdisciplinary instruction. First, they get to know them theoretically in the student role, and then they apply them in classroom practice in the teacher role.

The course Didactics of Natural Sciences Subjects is taught for 2 hours per week during one semester (24 hours in total). However, students (pre-service science teachers) work not only during lessons but also outside of these lessons. The course is based on LCT, aiming for students to learn designing an interdisciplinary topic and then implement it using an innovative method: inquiry-based science education (IBSE). Course participants are future science teachers.

At the beginning of the course, interdisciplinary student teams are created; members are experts in natural sciences, and they collaborate in preparing quality interdisciplinary topics and design of IBSE. Teamwork is essential for quality interdisciplinary teaching/learning, and it enriches all participants in the educational process. University teachers, experts in natural sciences, didactics, and pedagogy have the role of mentors. This interdisciplinary teaching/learning can facilitate students in learning about approaches, theories, and methodologies from various disciplines of the social and natural sciences.

As for LCT, students choose an interdisciplinary topic based on an agreement in the interdisciplinary student team. University teachers are only mentors. They support students to work with content under the principles of LCT. In the first part of the course, students are taken responsibility for the selection and preparation of an interdisciplinary topic. The student teams present their interdisciplinary project, self-assessment and peer-assessment are going. Mentors during all lessons create a supportive environment for student work.

In the second part, student teams implement the interdisciplinary project using IBSE in schools. This time, students act in the role of teachers and their teaching must respect the principles of LCT, with which they became acquainted theoretically and practically in the role of learners in the first part of the course. Pupils, participants of these lessons, work in teams. In the end, they evaluate their work (self-assessment), the work

of other teams (peer-assessment) and they give feedback to teacher -candidates about the teaching effectiveness.

University teachers and experienced school teachers who observe the process of interdisciplinary instruction using IBSE. In the last stage (approximately 3 hours) they give feedback to the students (pre-service science teachers), and these students perform self-assessment. This last stage is crucial for the correction of possible inaccurate or inappropriate procedures.

The students (pre-service science teachers) are satisfied with the course Didactics of Natural Sciences Subjects and considered it to be beneficial for their practice. They evaluate it very positively in a subject survey organised by the university.

### **3.2. Methodology**

The research aimed to verify the development of interdisciplinary instruction of natural science subjects using IBSE in the frame of LCT. The research was focused on the education of pre-service teachers and pupil educational outcomes. In this chapter, the author presents only the research findings related to the education of pre-service teachers. Therefore, the research question is:

*How does LCT implementation in pre-service teacher training influence the development of interdisciplinary instruction using IBSE?*

The research sample was composed of 36 students (pre-service science teachers) from the Faculty of Education at Masaryk University, the Czech Republic. These students were preparing for interdisciplinary instruction using IBSE in the frame of LCT in the course Didactics of Natural Sciences Subjects.

Three main data collection research methods were used (semi-structured interviews, questionnaire, and analysis of teacher candidate's products) to answer the research question mentioned above. The mixed design

approach was applied (Creswell & Creswell, 2017). First, semi-structured interviews were carried out with all (36) research participants and questions were focused on the professional competencies connected with the development of interdisciplinary instruction using IBSE in the frame of LCT. Response analysis was performed using open coding (Strauss, 1987; Mason, 2018). Based on the results of this analysis, items of the questionnaire were created using a Likert scale (Půlpán & Kulička, 2015). The analysis of teachers-candidate's products (teacher preparation for teaching, teacher's diary, teacher's comments of teaching, student products, etc.) was the third method and the methodological background was based on Woolley (2008), and Creswell and Creswell (2017). This method was used for the verification of the research findings of the previous two methods. The research was carried out in the period between 2016-2017 (Trnova, 2019).

### **3.3. Research findings: questionnaire**

The participants expressed their subjective assessment of the extent of acquired professional competencies. To determine the level of acquisition, the 5-point Likert-type rating scale was used (1-Very weakly; 2-Weakly; 3-Normally; 4-Strongly; 5-Very strongly) to measure the development of their professional competencies. Table 1 provides an overview of the leading professional competencies mentioned by pre-service science teachers. The development of the main professional skills connected with LCT is presented in Table 2.

The collected data (tables 1 and 2) showed that the pre-service teacher professional competencies for interdisciplinary teaching and LCT were developed significantly. For example, the case of interdisciplinary teaching was chosen by more than half of respondents for four professional-pedagogical competencies necessary for interdisciplinary instruction (*to motivate pupils, to encourage pupils to solve interdisciplinary problems, include interdisciplinary topics from everyday life relevant to pupils, to develop lifelong learning skills*). The significant development of most of

the respondents' monitored professional-pedagogical competencies is even more apparent when the number of respondents' answers of the categories "strongly" and "very strongly" are summed up. In this case, apart from "develop pupil self-assessment," pre-service teachers noted significant development of their professional competencies for interdisciplinary instruction. This finding is confirmed by mean value, which is above 4 (strong agreement with development) for all professional competencies. This finding was also verified using the analysis of educational products created by the research participants.

TABLE 1. Questionnaire of pre-service teachers – data

In the frame of LCT using IBSE in interdisciplinary instruction, I am able to:	(1) Very weakly (%)	(2) Weakly (%)	(3) Normally (%)	(4) Strongly (%)	(5) Very strongly (%)	Mean values (1)–(5) N = 36
motivate pupils for natural science	0	0	0	31	69	4,69
encourage pupils to solve interdisciplinary problems	0	0	0	42	58	4,58
include interdisciplinary topics from everyday life relevant to pupils	0	0	3	39	58	4,56
develop lifelong learning skills	0	0	8	36	56	4,47
develop skills of pupils to connect information from different natural science subjects	0	0	0	58	42	4,42
develop pupil self-assessment	0	0	20	36	44	4,25
develop pupil team collaboration	0	0	8	73	19	4,11

Similarly, students stated about LCT in connection with their classroom practice. The results are presented in Table 2.

TABLE 2. Questionnaire of pre-service teachers – data

In the frame of LCT, I am able to realise changes:	(1) Very weakly (%)	(2) Weakly (%)	(3) Normally (%)	(4) Strongly (%)	(5) Very strongly (%)	Mean values (1)–(5) N = 36
role of teacher	0	0	2	33	65	4,63
balance of power	0	0	4	37	59	4,55
responsibility for learning	0	2	16	53	29	4,09
function of content	0	0	11	31	58	4,47
purpose and processes of assessment	0	0	24	25	51	4,27

The collected data showed that pre-service teachers consider they can realise the changes needed for LCT. Interestingly, there has been a slight shift from the highest category, very strongly, of the Likert scale, to the lower ones, but the mean value is still above 4 (strong agreement with professional development). Students felt less confident in the skill to change pupils' responsibility for learning. It is in accordance with the reality in the Czech schools that students experienced as learners, because teaching/learning was mainly based on transmissive educational methods preferring teacher-centred teaching. It is positive; the research findings show that students are interested in changing the traditional ways of teaching that persist in Czech schools, if they gain experience with LCT during their study. Then it can be assumed that they will apply LCT in their future classroom practice. It is therefore essential for pre-service teachers to meet LCT as much as possible during university learning.

Based on the above presented data, the research question *“How does LCT implementation in pre-service teacher training influence the development of interdisciplinary instruction using IBSE?”* can be answered that the implementation of LCT develops students' professional competencies in the field of interdisciplinary instruction.

## 4. Discussion

This chapter aimed to describe a good example of practice how to educate teacher-candidates in innovative educational strategies. The introductory text of this chapter describes in detail the theoretical background, which was respected in the content of the course Didactics of Natural Sciences Subjects and in our research design. When preparing teachers, it is necessary to pay attention to teaching, so students can transfer their experience to their future practice.

Our research results have shown that students are strongly influenced by the way they are taught at the university and this also affects their further career. This finding is consistent with other educational experts who argue that the student-centred approach to teaching is associated with higher quality learning outcomes (e.g. Trigwell & Prosser, 1991; Trigwell, et al., 1999; Kember & Kwan, 2000).

In the field of LCT, Weimer (2013) was the basic source of knowledge, because it best meets the requirements for the outputs that students (future teachers) should achieve according to the graduate profile required by our faculty. An agreement with other expert opinions was also monitored. Our frame of LCT based on Weimer's were compared with attitude to teaching presented by Slavic and Zimbardo (2012). We were inspired by the study of Kember and Kwan (2000) aimed to characterise the innovative approaches to the teaching of university teachers, and to examine the relationship between teachers' approaches to teaching and their conceptions of good teaching. Our research findings of LCT are in accordance with the above-mentioned ideas.

The Guckey model of teacher change (see Figure 2) was respected because according to expert science teachers have been found to be more likely to adopt a teacher centred teaching (TCT) than LCT. Richardson (2005) states that research of university teachers in the United States have found that beliefs about teaching differ across various disciplines, and that these distinctions are related to the teachers' beliefs about the nature of the discipline in which they teach. Lindblom-Ylänne, et al. (2006) confirmed that teachers from the pure hard sciences (such as chemis-

try) preferred an information transmission/teacher-focused approach to teaching. Our research results show a shift from TCT to LCT, because the teaching was designed with an emphasis on the active role of students and knowledge about LCT was respected.

#### **4.1. Barriers for the implementation of LCT**

Teachers getting familiar with the principles of learner-centred teaching and beginning the implementation of LCT in their classroom practices are most concerned about the loss of their authority and decrease in the standard of learning outcomes. The concern about losing the teacher authority comes from the recommendation to shift the traditional being a teacher to becoming a facilitator or mentor. To overcome this barrier, it is necessary the understanding what authority is and what a teacher can do to gain the respect of his/her students and maintain it. The natural authority of a teacher, which is desirable, is not dominance-based on the teacher status. On the contrary, the overly authoritative attitude of a teacher can interrupt the educational process. It is a proven fact that students perform better outcomes in a supportive environment (Minor, et al., 2002). Moreover, this environment can be made with the use of LCT. The teachers refusing the LCT methods argue that using the LCT principles cause a decrease in the knowledge and skills of students. As has already been mentioned in the previous text, teachers often compare the quality of education outcomes with the amount of “transferring knowledge”. In the Czech Republic, this change associated with the function of content is especially problematic. Czech teachers often express themselves in short that “students will learn less, and it will take a longer time”. Teachers should realise what the main goals of their teaching are. They often mistakenly believe that it is the transfer of a large amount of information that students do not master properly and forget that quickly without the ability to use the knowledge in everyday life – it is only superficial knowledge. At the current time with the rapid development of technologies, it is not possible to “teach everything.” The great advantage of LCT

is that learners learn how to study, which is considered a demanded skill in the 21st century. With the preferred support of lifelong learning, this essential skill is more and more significant. As can be seen in the model of teachers change mentioned above by Guskey (1986), teachers should convince themselves about the persistence of knowledge acquired within learner-centred teaching.

The time intensity mentioned by teachers should be discussed in terms of teaching effectiveness and specifying “what time” is demanded. If it is the time spent by a teacher to prepare his/her lesson in general or the time he/she dedicates to prepare the specific teaching content. The quality teacher training for this type of teaching is time-consuming than for traditional teaching, for instance, to prepare the content interpretation. Teachers must carefully consider possible alternatives in activities for students and to plan how to support them. However, considering the transferring knowledge is the required time compensated by the high-quality learning outcomes, as has already been explained above.

Teachers are concerned that younger students cannot assume responsibility for their results. They should be able to balance the responsibility bearing by a student and by a teacher. The fact that there are more tasks offered to a student leads him/her to understand responsibility. Similarly, it is with giving students the possibility of scheduling their task fulfilment. In the beginning, the role of the teacher is undoubtedly higher, and it is possible to eliminate it with the right guidance of students.

Another potential barrier is the attitude of teachers to change the assessment. In the Czech education system, a summative assessment predominates. Even though teachers have been strongly encouraged to use a formative assessment recently, it has not become a regular practice. Furthermore, there is an often objection that students are not capable of quality self-assessment and peer assessment. Teachers have a lack of experience with assessment methods from their schooling; that is why it is so crucial for teacher applicants to experience a different approach at least during their university studies so that they can implement this strategy in practice.

## 5. Conclusion

The change in classroom practice is generally a slow process, given the complex nature of the educational process. Considering that the quality of teachers is the fundamental factor affecting learning outcomes, it is necessary to pay great attention to their education, especially in the area of innovative educational strategies. It is necessary to implement innovations already into pre-service teacher education to increase the effectiveness of teacher education. Teacher candidates need to construct their professional pedagogical skills based on experience acquired, first as learners, and later as teachers with the support of experienced teachers and experts. This method of teacher constructivism connects teachers' experience from instruction with pedagogical knowledge and skills and creates high-quality professional pedagogical competencies.

The presented research findings confirm that a properly implemented innovative component in pre-service teacher education can improve the quality of professional competencies and teachers are then not afraid of its implementation in their teaching. During pre-service training, students should have the possibility to acquire core knowledge and skills connected with innovative educational strategies, which they currently do not experience during their studies. The presented pre-service teacher education in the course Didactics of Natural Sciences Subjects could be an example of how to educate future teachers of natural science subjects.

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## **PROBLEM-BASED LEARNING**

**ABSTRACT:** This chapter explores a student-centred educational method used in Higher Education worldwide: Problem-Based Learning (PBL). PBL is both a teaching/learning method and a curriculum organizer based on the principle of using problems as the starting point for the acquisition of new knowledge. It was first introduced in the early Seventies at McMaster University in Canada to train future medical doctors. Its introduction provoked a real revolution in the academic community: a significant number of other universities adopted PBL in their programmes (e.g., Maastricht University in the Netherlands, Aalborg and Roskilde in Denmark, Linkoping in Sweden, Harvard in the USA and many others). This chapter describes the theoretical fundamentals of PBL (Dewey and Barrows); the different models (McMaster Model, Maastricht model, Aalborg model); the elements of PBL (tutor, small group of students, problem, setting, process); the assessment (triple jump and progress test); the efficacy (results from systematic reviews about PBL impact on students learning); new trends in PBL; and further studies in PBL.

**Keywords:** Problem-based learning, teaching methods, student-centred education

### **1. A short history of Problem-Based Learning and its different models**

Problem-Based Learning (PBL) is an instructional method and a curriculum organizer introduced in higher education in the Seventies in some Canadian and European higher education institutions, provoking a sort of educational revolution for its student-centred approach. Its roots are found in some philosophical concepts and authors like Plato, and his Socrates' dialogue with Meno, and John Dewey, but also in some psychological theories like cognitivism and constructivism. It could be useful to trace a short history to understand how it was introduced in University education and its evolution until recent days.

The first institution to use PBL was McMaster University in Canada where president Harry Thode appointed in 1963 a young medical doctor, John Evans from the University of Toronto, to reform their school of Medicine. John Evans knew that he wanted to train graduates who would be able to: 1) identify and define health problems, 2) examine the underlying physical and behavioural mechanisms, 3) maintain and develop personal attitudes required for professional life, 4) acquire the clinical skills and methods required to define and manage health problems of patients, 5) become self-directed learners, 6) evaluate the professional activity both personally and that of other professionals, and finally function as a productive member of a small group to be able to work in a variety of healthcare settings.

Evans created a new Education Committee with four colleagues and “they drafted a plan for a new medical programme that turned medical education on its head, did away with tedious lectures, years of basic science before there was a patient insight, and the silos of disciplines” (Servant-Miklos et al., 2019, p. 5). The curriculum was planned as a sequence of interdisciplinary units based around organ systems (cardiovascular, digestive, respiratory, locomotor, etc). Within these units, students were introduced to the material through biomedical and clinical problems. They were divided into groups of four to six students under the guidance of a tutor who had the task of facilitating the discussion, without giving lectures or scientific content. At McMaster, very few lectures were accepted, the focus was on field trips, guided instruction and role playing. Another important point at McMaster was the aversion towards summative assessment, and students had only formative assessment until the final examination due for medical license (LMCC).

In 1968 Howard Barrows, a neurologist, arrived at McMaster, with his new creation: simulated patients, actors specially trained to present problems to the small groups of students. In 1969 McMaster admitted its first cohort of twenty students for a new three-year medical programme. The programme was divided in four phases, all integrating basic and clinical sciences. This programme lasted only four years, until John Evans left McMaster, and then a new leadership was taken by Howard Barrows and

Vic Neufeld. Howard Barrows wrote a paper in 1974 and gave a name to this new educational method: problem-based learning (Neufeld & Barrows, 1974). He wrote, together with Robyn Tamblyn, the first book dedicated to PBL, which is a masterpiece in the field of medical education (Barrows & Tamblyn, 1980).

In 1970 the Dutch government decided to create a new medical school in the southern region of Limburg and appointed the new dean, Harmen Tiddens, to plan a completely different school in The Netherlands. Tiddens was a good friend of John Evans and went, with a delegation of future academic teachers, to visit McMaster University. They returned with the idea that PBL would be the educational method used in all the new University of Limburg's programmes: Medicine, Health Sciences, Law and Economics.

The Maastricht medical programme was a six-year programme and had to admit very young students coming from secondary schools, so it was necessary to re-think a new model of PBL. A Department of Educational Research and Development was established by three psychologists: Wynand Wijnen, Henk Schmidt and Peter Bouhuijs. Henk Schmidt proposed a more structured way of leading the tutorial process along seven steps: each tutor had to lead a group of students during two sessions for each problem (table 1).

<p><i>In small groups</i></p> <p>Step 1: clarify terms and concepts not readily comprehensible</p> <p>Step 2: define the problem</p> <p>Step 3: analyse the problem</p> <p>Step 4: make an inventory of the explanations inferred from step n.3, proceeding systematically</p> <p>Step 5: formulate learning objectives</p> <p><i>Individual work</i></p> <p>Step 6: collect additional information outside the group</p> <p><i>In small groups</i></p> <p>Step 7: synthesize and check the newly acquired information.</p>
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TABLE 1: the Maastricht seven jumps

In Denmark, during the student revolt in 1968, the Danish parliament decided to establish two new universities whose pedagogy would be completely different from the traditionally teacher-centred ones. The first was opened in Roskilde and the second in Northern Jutland, in Aalborg. Both chose a problem-orientation, participant direction and interdisciplinary approach in project work. The starting point of the learning journey had to be a social problem from which theory and knowledge should be relevant to practice. The main features of this model were, first: responsibility for problem-formulation was a joint venture between students and teachers rather than teachers alone; second: problems were not tackled in short week-long cycles like at Maastricht, but in semester long projects, usually done in groups of six to eight students; third: regular courses with lectures were included in part of the model, the usual split being 50% for project work and for 50% coursework (Servant-Miklos, 2019). Only in the 1990s the Aalborg's Dean of Engineering Finn Kjaersdam, renamed this curricular approach as "problem-based learning model" therefore the Aalborg model entered the international PBL scene. In 2007, UNESCO established a chair for PBL in Engineering education in Aalborg and their researchers started to write papers describing the Aalborg model and the main differences from the Maastricht model (Kolmos et al., 2019).

## **2. Theoretical foundations of PBL**

Barrows writes that "there are many antecedents to problem-based learning in the writings of Bruner, Gagne and Dewey and it is logical to think that their work inspired its development as an educational method in medicine in the late 1960s" (Barrows, 2000).

The roots of problem-based learning can be traced back to the progressive movement, especially to John Dewey's belief that teachers should teach by appealing to students' natural instincts to investigate and create (Deslisle, 1997). There is a common underlining thread that links

together PBL with John Dewey's book "How we think" (Dewey, 1933) with cognitivism and constructivist frameworks.

Henk Schmidt, the Dutch cognitive psychologist, led research to provide empirical support for the cognitive underlying bases in PBL (Schmidt et al., 1989a; Schmidt et al., 1989b). Schmidt argued that in PBL, a number of principles of learning are considered to be basic to many forms of human learning, comprehension and problem solving. These principles can be summarized as following: 1) prior knowledge, 2) activation and elaboration through small-group analysis, 3) the construction of problem-oriented semantic networks, including contextual cues derived from professional relevant problems; and 4) the fostering of epistemic curiosity (Schmidt, 1983).

During the Progressive Era, Dewey saw the tackling of significant problems as the ultimate way to engage learners in meaning making and problem solving. He further believed that learning should be situated within the context of community. Interest in such open inquiry, activity-based and integrative approaches in our classrooms has grown in recent years. These types of approaches are called constructivism. Problem-based learning may be one of the best exemplars of a constructivist learning environment (Savery et al., 1995).

### **3. Elements of PBL**

During the last decades, problem-based curriculum, as introduced in its true state at McMaster University School of Medicine in 1968, has mutated into many different formats, each labelled as "problem-based" or PBL. Most of these mutations differ significantly from real problem-based curriculum or problem-based education (Barrows & Wee, 2010). Since Howard Barrows thought that the application of his educational approach, in some situations, showed some intended and unintended "pollution", he decided to write a new book in 2010 to re-define what authentic PBL is (Barrows & Wee, 2010),

### **3.1 Definition of the problem**

In authentic problem-based learning, problems provide the stimulus for learning. They are not narratives or case presentations, rather cases obtained from the real work setting; they facilitate the development of problem-solving skills; and they present opportunities for the learners to acquire the integrated and relevant knowledge and skills needed for their next stage of educational or professional practice.

Problems should be ill-structured, providing cues that leave students free to ask questions and to formulate many hypotheses. At the same time ill-defined problems should have one central theme, similar to a mystery story, rather than multiple themes. The problems usually consist of descriptions of a set of phenomena or events that need explanation (Norman & Schmidt, 1992). The process of designing a problem for PBL is quite difficult because a good problem should have three requirements: it should allow deliberation (instead of just description); it should guide the tutorial group and include a certain amount of scaffolding; and at the same time successful assignments should provide space for the learners to define their own interests and establish relevance (Maurer, 2016). (See annexes).

Although written simulation formats are easy to create and to use, they have limitations that need to be recognized. There are a wide variety of formats that provide many advantages for the learner (Barrows & Wee, 2010). The main formats are written problems, problem simulations, sequential management problems, problem-based learning modules, computer simulations, virtual reality, human simulations, models, and actual problems.

### **3.2 Definition of the tutor**

The key idea is that the teacher in the tutor's role is that of a facilitator or educational guide for learners in PBL. The tutor provides guidance as needed, allowing the learners to assume responsibility for the learning process and/or their own learning (Barrows & Wee, 2010).

The tutor has the responsibility to guide learners through all the phases of a PBL unit, to probe learners' knowledge and understanding in order to judge learners' progress, strengths, and weaknesses. The tutor is also tasked with monitoring and managing the group's interpersonal dynamics, while encouraging learners to take on responsibility for their own learning and evaluation. McCaughan pointed out similarities between Barrows' principles for the PBL tutor's actions with Dewey's theories that address teacher behaviours and with Carl Rogers's conceptual frameworks that support the therapeutic behaviours of the client-centred therapist (McCaughan, 2013).

### 3.3 Definition of the educational setting

The common learning configuration in a PBL session includes a small group of learners, usually five to seven, and a tutor. This allows participants in the group and the tutor to get to know each other as a team and provides adequate time for all the learners to express their ideas, acquire knowledge and develop suggestions for the group (Barrows & Wee, 2010). In the authentic PBL approach, each group has an assigned room where the group of students, with their tutor, meet twice a week. In this room there is a table, a video projector, a flipchart and a white or a blackboard (see image 1).



IMAGE 1: Problem-based Learning setting at McMaster University.

In some Universities, due to the limit of human resources, a larger group of thirty students could be split into some smaller groups of five students, while a tutor leads all the PBL process, like at Wake Field University in North Carolina in the USA.

### **3.4 Definition of evaluation**

The key idea is that assessment drives learning. The assessment methods used in PBL need to measure learners' progress towards achieving the outcome objectives, but in a way that is learner-centred and in the right context. The self and peer assessments carried out in the tutorial groups are complemented by an end of unit formal assessment of the performance of the individual learners working with a problem. The pooled results of these assessment methods can assist in the evaluation of a curriculum (Barrows & Wee, 2010).

Students are evaluated by formative and summative assessment. Assessment can be carried out within the tutorial group to evaluate problem-solving performance, self-directed performance and performance as a member of the group. At the end of the unit each student should be evaluated to verify that she/he has also gained specific knowledge applied to these problems.

A very coherent evaluation method was created at McMaster to assess the clinical problem-solving and self-directed learning skills: the Triple Jump (Painvin et al., 1979), an oral structured tool. In a Triple Jump exercise, a student discusses a written scenario and identifies the learning goals, reviews the learning materials individually, and returns to the examiner to present his conclusions and judges his own performances as self-evaluation.

Another original and formative evaluation method, created by Wijnen at Maastricht University (Servant-Miklos et al., 2019), is the Progress Test, an assessment format whereby students of all years would be confronted with the same test comprising 250 true/false questions, administered four times a year. First-year students would be able to answer very little

whereas final-year students would be expected to obtain a score of at least 70%. This means that students do not have to learn in any particular order, and they can monitor the improvement of their knowledge during the years, since in a PBL curriculum, students study all the disciplines in an integrated way.

#### **4. Research in PBL**

Several studies have compared the results of problem-based programmes with those of conventional curricula. The reviews concentrate on studies concerning the educational outcomes of the curricula of an international group of medical schools known as the Network of Community-oriented educational institutions for health. (Schmidt et al., 1989 b). In the beginning several potential advantages for students' learning were claimed for PBL students: they seemed to be more highly motivated, better problem-solvers, better able to learn and recall information, better able to integrate basic sciences knowledge for the solution of clinical or complex situations (Norman & Schmidt, 1992). The first enthusiasm was questioned by some systematic reviews (Colliver, 2000) and by other researchers who tried to clear the real effects and value of PBL on student learning (Moallem, 2019). Moallem attempted to evaluate the effects of PBL on learning outcomes, knowledge acquisition and higher-order thinking skills. She found that it is very difficult to make comparisons between PBL and conventional programmes because PBL approaches often show differences in practices. In disciplines for different age groups there is ambiguity in the conceptualization of learning and there is a lack of theoretical framework for the constructs being assessed given various practices of PBL. She concludes that long-term knowledge retention, performance or skill-based assessment measured by observation with clinical ratings, mixed knowledge and skills assessment tends to favour PBL (Moallem, 2019). Furthermore, Dabbagh showed that PBL fosters the development of critical thinking skills such as problem-solving, analytic thinking, decision making, reasoning, argumentation, interpretation, synthesis, evaluation, collaboration,

effective communication, and self-directed learning (Dabbagh, 2019). Rotgans and Schmidt showed that micro-analytical measures hold promise to explain how PBL is responsible for enabling and supporting student motivation and why group interactions have a positive effect on student motivation, interest and learning (Rotgans et al., 2019). Leary and others confirmed that PBL is really effective in developing self-directed learning skills (Leary et al., 2019). Fonteijn and Dolmans reported that PBL can offer an excellent environment for building one of the very important twenty-first century skills: teamwork (Fonteijn et al., 2019).

## **5. New trends in PBL**

Technology innovations, particularly networked and immersive technologies have opened a myriad of new possibilities to enhance and apply PBL more successfully, also in e-learning environments. Instead of a traditional written format, problems can be presented on screen or in MP3 format. Free or low-cost well-known platforms like Youtube and Vimeo allow the integration of realistic and enriching information about the proposed scenario for PBL sessions. Skype from Microsoft, WhatsApp from Facebook, and Hangouts, Drive, Docs from Google are examples of technologies that could facilitate distance meetings for small group tutorials or as a repository for newly acquired knowledge. 3D Immersive platforms and Problem-Based learning have been successfully implemented in Brazil at the Virtual University of Sao Paulo for over 3.000 students (Araujo, 2019).

Moallem (2019) shows how PBL and computer-based Modelling and Simulation are naturally and powerfully complementary. Students may build their own models or modify an existing model to answer questions like “What if the Earth’s orbit were circular?” working in small groups to test ideas and discuss results. Computer-based modelling can be seen as a powerful tool that can complement and enhance PBL. In the last two decades some institutions started online PBL carried showing that there are no significant differences in students’ learning. Surprisingly, it was

noted that students preferred online PBL since they perceived a better use of their time (Savin-Baden et al., 2019).

Another interesting topic is the relation between PBL and MOOC (Massive Open Online Course), since at first sight PBL seems in contrast with the large-scale and limited teacher support of MOOCs. There are two stimulating experiences that are surprising: at Maastricht University and the Higher Institute for Health in Italy.

The University of Maastricht designed and implemented the MOOC “Problem-based learning: principles and design. Students at the centre!” to introduce participants to the PBL method: principles of learning, the role of the tutor in PBL, designing PBL problems and courses, assessment, and organizational aspects of PBL and applications of PBL principles. Students were divided in small groups and the course was intended to last 9 weeks. About 3.000 students enrolled for the first run in 2015 showing that it is feasible to have a MOOC coherent with problem-orientation, also in an online and distance format.

Other stimulating experiences are held in Italy by the Higher Institution for Health which runs MOOCs about health topics using the PBL method for online courses offered to 2.500 health professionals each time (Bonciani et al., 2013; Guerrera et al., 2014).

## **6. Future directions of PBL**

In 1979 the World Health Organization (WHO) facilitated the creation of “The Network of community-oriented educational institutions for health” which grouped many community-oriented schools of medicine, in each continent, to use problem-based learning as their main instructional method (WHO, 1987). In 2000, the Network was transformed in “The Network: Toward unity for health (TUFH)” that today counts with over 200 member institutions, organizations and individuals, with the vast majority from developing countries. TUFH sought collaboration with their health systems to adapt and integrate health personnel’s education and health services in order to improve the health of the community. The members

also explore innovative educational approaches (e.g. community-based education and problem-based learning) to fulfil this mission. Among those institutions there is also Harvard University.

Nowadays many Universities use PBL at the international level. For example, in Europe there is a UNESCO Chair for PBL, which is hosted by the University of Aalborg in Denmark. This entity organizes workshops, research activities, a Masters programme, and also a biennial research symposium on PBL<sup>1</sup>.

Other conferences dedicated to PBL are the International problem-based learning symposium, held every 2 years in Singapore, and the Pan-American Network for PBL that is held in North and South America every 2 years.

There are also 2 Journals dedicated to Problem-based learning:

1. *Interdisciplinary Journal of Problem-based Learning* was launched in 2006 and published by Teaching Academy at Purdue University, School of Education, University of Indiana, USA and in 2010 jointly by the University of Memphis. The journal is an online, peer-reviewed publication, offered to the educational community as an open-access journal.
2. *Journal of Problem-Based Learning in Higher Education* launched in 2013 and published annually by Aalborg University.

Finally, we hope that problem-based learning could become a deeper-seated philosophy of engaging students with real-world, societal problems, where they become change agents and develop as critical citizens (Ryberg, 2019).

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<sup>1</sup> The first International Research Symposium on Problem-Based Learning (IRSPBL) was held in Aalborg in 2008; the second in Melbourne, Australia in 2009; the third in Coventry, UK, in 2011; the fourth in Kuala Lumpur in Malaysia in 2013; the fifth in Spain, in 2015; the sixth in Colombia in 2017; the seventh in China in 2018; the eight in Aalborg again, in 2020.

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## Annexes

### **PBL 1: An agitated awakening – scenario for second year Medical students (University of Bari, Italy) (Lotti, 2018, p. 152)**

A 20-year-old boy, worker, is accompanied by his family members to the emergency room. His anxious mother reports that, a few minutes after waking up, the boy suddenly fell to the ground, after having uttered a scream. He appeared at first stiff, with his head and eyes turned to the top right, and then shaken by tremors all over the body. Subsequently, he began to experience laboured breathing and drooling from the mouth. The episode lasted about a minute. The boy recalls only that first he had a sense of narrowing in the stomach that went up to the head, accompanied by a strong sense of nausea and therefore he found himself incontinent of urine, a blood-stained tongue and generalized weakness and pain in all muscles. What do you think has happened?

### **PBL 2 Cristian and robots – scenario for third year Educational Sciences students (University of Genoa, Italy) (Lotti, 2018, p. 164)**

You are a teacher in a kindergarden in the Ligurian hinterland. In September, Cristian, a 5-year-old boy who has spastic diplegia (with compromised lower limbs) arrived from Milan. He has history of Infantile Cerebral Palsy with sensorineural hearing loss and severe psychomotor retardation. The teachers give you his medical record which shows that Cristian's mother had a normal pregnancy until an early rupture of the amniotic sac at 24 weeks, which was followed by premature birth. Cristian weighed 850 g at birth, had severe prematurity, and underwent mechanical ventilation for 45 days and numerous transfusions. The teachers also inform you that Cristian while in Milan had participated in the programme called GI.RO.TU. with IROMEC robot with satisfactory results in the development of the visual-spatial capacity. Furthermore, in schools, his teachers used robots adapted with assistive technologies. In your school these resources are not available, therefore Cristian's teachers and family ask you to adapt the toys available at the institution to make them accessible to the child for both educational and recreational purposes.

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