**Teaching, In Spite of Excellence: Recovering a Practice of Teaching-led Research**

**Abstract**

Although, as a result of the introduction of the Teaching Excellence Framework, the principle of teaching excellence is receiving renewed attention in English higher education, the idea has been left largely undefined. The cynic might argue, in agreement with Bill Readings, that this lack of a precise definition is deliberate, since teaching excellence is not designed to observe teaching but to permit an integrated system of accounting. This article, however, develops a different line of criticism. Following Readings’s characterization of “excellence” as symptomatic of the “Americanization” of higher education, it traces the principle of teaching excellence in English educational discourse back to the influence of debates, led by Ernest Boyer in the US, concerning the teaching-research nexus. Contextualizing these debates in relation to ideas about the learning society influenced by theories of human capital and investment in national productivity, it takes issue with descriptions of recent policy that overemphasize the corporate structure of the university and its vision of the student as consumer at the expense of recognizing the continuation of the nation-state organization of the student as producer. Reconnecting this broader framework back to the teaching-research nexus, the article examines how this intersects with the dominant agenda of research-led teaching excellence, centred on the idea of the productivity of research, and outlines an alternative notion of teaching-led research, developed out of the work of Boyer and Walter Benjamin, within which teaching might continue, in spite of excellence.

**Keywords**

Benjamin · Boyer · Human capital · Readings · Teaching excellence · Teaching-led Research

Although the importance of teaching and the pursuit of teaching excellence have regularly been deployed to justify reforms to higher education over the last four decades, they are receiving renewed attention as a result of the introduction of the Teaching Excellence Framework (TEF) recently imposed on English universities. The TEF is part of an ongoing and controversial raft of larger reforms of the English system of higher education that have been justified by a vision of ‘Well-informed students driving teaching excellence’ and ‘put[ting] excellent teaching back at the heart of every student’s university experience’ (BIS 2011, 25-27). While the government argues that ‘there is a need to provide greater clarity about what we are looking for [in the TEF] and how we intended to measure it,’[[1]](#footnote-1) it concedes that ‘there is no one broadly accepted definition of “teaching excellence”’ (BIS 2015, 18, 21).

Rather than offering a plurality of definitions, however, teaching excellence has been repeatedly left undefined in such documents. The 2016 White Paper, *Success as a Knowledge Economy: Teaching Excellence, Social Mobility and Student Choice* (BIS 2016, 43), proposes to take ‘a broad view of teaching excellence, including the teaching itself, the learning environments in which it takes place, and the outcomes it delivers,’ and includes ‘the “soft skills” that employers consistently say they need …capacity for critical thinking, analysis and teamwork, along with the vital development of a student’s ability to learn’, but gives no indication what would constitute excellence in teaching these skills.[[2]](#footnote-2) Confusingly, while initial proposals for the ranking of institutions considered a rating of ‘excellent’ to be less excellent than ‘outstanding,’ the latest specifications will now have three ‘levels of excellence’ designated as bronze, silver and gold (DOE 2016a, 23; DOE 2016b, 34).

Over a decade ago, Skelton (2005, 3-7) had already pointed out that ‘teaching excellence is now part of the everyday language and practice of higher education,’ but questioned whether it ‘can become a valuable and meaningful concept rather than a technical and bureaucratic concern which offers no direction and “has no content”.’ Skelton drew on Bill Readings’ (1996, 27) critical analysisof the more general rise of the rhetoric of excellence within American higher education, which notes how the term’s flexibility – since excellence is valued by everyone, even if everyone has a different understanding of what constitutes excellence – permits those employing it to allow ‘a category mistake to masquerade as scientific objectivity.’ According to Readings (1996, 29), the ‘notion of excellence, functioning less to permit visual observation than to permit exhaustive accounting,’ therefore ‘works to tie the University into a similar net of bureaucratic institutions …to allow the University to understand itself solely in terms of the structure of corporate administration.’

From this perspective, the lack of a precise definition of excellence in teaching, and the choice of metrics and incentives that seem unrelated or even in contradiction with quality practice,[[3]](#footnote-3) are not accidental, since teaching excellence is not designed to observe teaching but to permit a system of accounting. In this sense, the rhetoric of excellence is flexible enough to permit the integration of local diversity between different kinds of educational providers – key for the introduction of more alternative, private providers – into the unity of a system regulated primarily, as Readings (1996, 27) suggests, by ‘questions of relative value-for-money, the question posed to student who is situated entirely as a *consumer*, rather than as someone who wants to think.’[[4]](#footnote-4)

Although sympathetic to the broader cynicism towards the rhetoric of teaching excellence arising from the work of Readings, Skelton and others, this article develops their line of criticism in a different direction. The first section corroborates what Readings calls the ‘Americanization’ of higher education by tracing the introduction of teaching excellence in the UK to the influence of US educational policy, led by Ernest Boyer, concerning an imbalance in the teaching-research nexus. By contextualizing these debates in relation to ideas about the learning society, influenced by theories of human capital, the second section takes issue with Readings’s euphemistic term “Americanization,” characterized in terms of the rise of the transnational, corporate university and the student as consumer, and will emphasize the intensification of state-driven national intervention with a vision of the student as producer. It reconnects these ideas to the teaching-research nexus by arguing that a further consequence of such changes is not a neutrality towards or antagonism between research and teaching excellence but rather the promotion of a narrower emphasis upon *research-led* teaching excellence centred on an idea of the productivity of research. In a more optimistic vein, the final section then seeks to recover, through a critical re-engagement with Boyer’s understanding of the teaching-research, a positive and countervailing notion of *teaching-led* research that dissociates the value and significance of teaching from its problematic connection with excellence and the productivity of human capital.

1. **Americanization**

Readings (1996, 4) attributes the emergence of a more general discourse of excellence within British universities to a growing ‘Americanization’ of global higher education. Teaching excellence began appearing in British academic discourse following the 1997 publication of the Dearing Report on *Higher Education in the Learning Society*, which called on institutions to remedy ‘inadequate recognition of teaching excellence’ (Dearing 1997, 114 & 215-6; cf. Fanghanel 2007, 200). In line with Readings’s claim, it seems to have been a visit to the US during the compilation of the report that nonetheless persuaded the committee involved to reject the principle of teaching-only institutions (Healey, Jenkins and Zetter 2007, 11-12) and to recognize instead ‘the important role of research and scholarship in informing and enhancing teaching’ (Dearing 1997, 115 & 177) that informs this concept of teaching excellence.[[5]](#footnote-5)

The Scholarship of Teaching and Learning movement referenced in the Report emerged in the 1990s from the influential work of American educational reformer Ernest Boyer (Fanghanel 2007, 200), and the Report (1997, 114) cites Boyer’s *Scholarship Reconsidered* (1990) to justify its recommendations to recognize teaching excellence, place students at the centre of learning and teaching, encourage active learning based on practical experience, and to encourage critical and creative thinking for lifelong learning (recommendations repeated in recent White Papers). As US Commissioner of Education in the late 1970s, Boyer had sought to shift federal priorities from mere access to education towards the promotion of educational excellence across the sector, linked to the increasing demands of what he referred to as the learning society (Boyer 1978, 21-25). The National Commission on Excellence in Education was established shortly after Boyer retired as Commissioner in 1979 to take up the presidency of the Carnegie Foundation for the Advancement of Teaching, and its report, *A Nation at Risk: The Imperative for Educational Reform* (National Commission on Excellence in Education 1983, 13), similarly advocated for a principle of excellence throughout education, defining a society that adopted such policies as a learning society.[[6]](#footnote-6)

Readings’s description of the more general spread of this discourse of excellence as a process of ‘Americanization’ finds further support in Boyer’s own preoccupation with the historical and national characteristics of scholarship within the American university. Charting the historical transformation of higher education in the US from the legacy of the British ‘colonial college,’ focused on teaching character for leadership, via the emergence of the service institute focused on applied research for nation-building, to the dominance of the German research university, Boyer’s *Scholarship Reconsidered* (1990, 3-13) plots a shift in the function of the university away from teaching to research partly attributed to the influence of the German model.

Boyer’s call for an expanded conception of scholarship to recalibrate the relationship between teaching and research therefore reflects an anxiety over the development of teaching excellence within a specifically American context of a mass, democratic system of higher education. The reports of the Carnegie Foundation (Carnegie Foundation for the Advancement of Teaching 1985; Boyer 1985a, 16; Boyer 1985b, ix), for example, repeatedly emphasize the national characteristics of such a vision, citing George Washington, Thomas Jefferson and the belief that ‘America began with the conviction that for democracy to work, education is essential’ because a nation’s ‘greatest strength is not its weapons, but its people… Education is, as it has always been, an investment in the future of the nation. The National Commission on Excellence in Education (1983, 13-17) defines ‘a *society* that has adopted …policies’ towards educational excellence as a learning society and defends the need for educational reform on the basis of “patriotism”: ‘Citizens know intuitively what some of the best economists have shown in their research, that education is one of the chief engines of a society’s material well-being’ and it ‘is, therefore, essential… for government at all levels to affirm its responsibility for nurturing the Nation’s intellectual capital.’

1. **The Learning Society, Human Capital and Research-Led Teaching Excellence**

The subsequent influence of this American model of teaching excellence upon the Dearing Report a decade later was informed by similar concerns about the need to reform higher education to provide a mass system of advanced education to meet the needs of the own UK’s learning society and a desire to imitate American solutions. The Dearing Report (1997, 9-10) defines the learning society as ‘a society in which people in all walks of life recognise the need to continue in education and training throughout their working lives’ as a result of shifts in the economy brought about by the development of communications technology. Although the term was popularized by Robert Maynard Hutchins’ *The Learning Society* (1968), the Dearing Report’s and Boyer’s use in close conjunction with notions of teaching excellence, national investment in intellectual capital and global competitiveness is more in tune with neoclassical economic theories of human capital developed by the Chicago School in the 1960s and 70s.[[7]](#footnote-7)

In the early 1960s, Theodore W. Schultz (1961, 1), drawing on economic research on investment and returns in US college education by Becker (1961), began to develop ‘a new research area in economics’ (Schultz 1972, 1-2) that argued that the useful skills and knowledge acquired through education and training should be conceptualized as a form of capital with economic value, in which we consciously invest in order to enhance our capacities to do productive work and, as a consequence, increase our future earnings (cf. Schultz 1972, 2-4). Human capital is therefore concerned with the ‘capital component in labour’: it ‘is a form of capital because it is the source of future earnings, or of future satisfactions, or both of them. It is *human* because it is an integral part of man’ (Schultz 1972, 5). Becker (1962, 9) defines investment in human capital as ‘activities that influence future real income through the imbedding of resources in people.’

A failure to include human capital in conventional economic analyses of capital has, Schultz (1961, 13-15; 1972, 25-28, 43) argues, led to a reluctance to reform taxation and banking laws that discriminate against human (as opposed to nonhuman) capital, such as the provision of long-term private and public loans to students, whose return on investment is recuperated through taxation, and a more widespread underinvestment in knowledge and skill relative to the amounts invested in nonhuman capital, especially in relation to higher education. In addition, Schultz (1972, 37 & 45) argues that ‘the condition of the stock of educational capital is adversely affected by an overemphasis on the quantity of schooling [i.e. days attended] relative to the emphasis given to its quality,’ and that students and their families must be provided with transparency about the costs and pricing of education and adequate ‘information on the differences in the quality of the educational services of different colleges and universities’ (Schultz, 1972, 45). It is this emphasis on *quality* – and its measurement relative to cost –that links ideas about the productivity of human capital to the contemporary discourse of teaching excellence.

As Andrew McGettigan (2015) points out, the thinking that informs the most recent reforms of higher education in England are derived from the same theories of human capital. The Dearing Report introduced the idea of teaching excellence for the learning society into the UK in terms of investment in life long education and training to ensure national competitive advantages in a rapidly changing working environment. *Fulfilling Our Potential* (BIS 2015, 10)*,* in which the TEF was introduced,begins not with a discussion of teaching excellence but of how ‘increasing productivity will be the main driver of economic growth in years to come, and improving skills are an essential component of this.’ *F*ixing the foundations: Creating a more prosperous nation (HM Treasury 2015), published by the Treasury in July 2015, proposes in its section on ‘Skills and Human Capital’ that long term investment in education is required through the radical reform of schools, Further Education and Higher Education, including the introduction of the TEF. The 2016 White Paper (BIS 2016, 5) which formalizes the introduction of the TEF identifies universities as ‘among our most valuable national assets, underpinning both a strong economy and a flourishing society’ and ‘Powerhouses of intellectual and social capital’ that produce success as a knowledge economy.[[8]](#footnote-8)

However, the ‘Americanization’ of UK educational policy has led not only to a greater focus upon the importance of teaching excellence, conceived as a driver of national economic productivity, but also contributed to a reconceptualization of the nature of teaching and learning, away from a model of knowledge transmission and passive consumption, towards teaching and learning in the mode of research (cf. Healey, Jenkins & Zetter 2007, 11-12). Healey, Jenkins and Zetter (2007, 54-5) have noted the American origins of these ideas. Dearing’s proposal (1997, 177 & 115) that less research-intensive institutions should withdraw from participating in the Research Assessment Exercise (the forerunner of the current Research ExcellenceFramework) and apply for funding to develop ‘the important role of research and scholarship in informing and enhancing teaching,’ for example, derives from Boyer’s attempt to conceptualize distinctive forms of scholarship appropriate for less research-intensive liberal arts colleges in *Scholarship Reconsidered*.

It was, however, originally in order to reflect the distinctiveness and diversity of the American higher education system and to challenge the ‘dominant view, [that] to be a scholar is to be a researcher’ that Boyer, in *Scholarship Reconsidered* (1990, 2 &15), advocated a more ‘comprehensive …dynamic understanding of scholarship,’ that included discovery, integration, application, and teaching, and their overlapping interrelationship. Rice (1991) concurred with Boyer that quality teaching requires a distinct form of scholarship that builds upon but is separate from the scholarship of discovery, and extended Boyer’s framework by integrating it with Kolb’s analysis of dimensions of learning to produce a taxonomy of different “ways of knowing” within scholarship. This was used by Griffiths (2004) to articulate four types of relationship between teaching and research: teaching and learning that was research-led, research-oriented, research-based and research-informed. Healey (2005) has expressed these differences diagrammatically, distinguishing between students emphasised as audience or participants and research emphasised as content or processes, and added the category of ‘research-tutored’ teaching and learning. Most recently, a University of Bedfordshire (2010) guide distinguishes more broadly between Research-informed Teaching (RiT), which encompasses research-led and research-orientated activities emphasizing teaching research content to an audience of students, and Research-informed Learning (RiL), including research-based and research-tutored practices developing research skills and processes in students as participants.

As this development of Boyer’s concept of scholarship suggests, the integration of research and teaching under the divergent pressures of ‘research excellence’ and ‘teaching excellence’ has come to subsume all notions of scholarship and teaching under that of research. Significantly, the final report of the Boyer Commission (1998, 7-15) emphasizes the benefits of integrating research and teaching in terms of the *productivity* of research: that investment in ‘productive research faculties’ might do ‘double duty’ – become *doubly* productive – if research is integrated with teaching, ‘restructuring both the pedagogical and the integrative aspects of the research university experience’ to make ‘research-based learning the standard.’ Similarly, although the UK’s Research Forum, established following the 2003 White Paper *The Future of Higher Education*, concluded that ‘research and teaching are essential and intertwined characteristics of a university’ (The Research Forum Report June 2004, quoted in Jenkins and Healy 2005, 51), investigations into the specific nature of this relationship came to focus almost entirely on the positive benefits of research and scholarship *upon* teaching, suggesting (The Research Forum Report June 2004, quoted in Jenkins and Healy 2005, 52) that ‘students who are not learning in an HE environment that is informed by research …are at a disadvantage compared to those who are.’ In response to the Forum, the government established a special fund ‘to support “research-informed teaching” outside of the research elite,’ based on the assumption that those already receiving high research income were already delivering or had the means to deliver research-based or research-led teaching, and that this should be the norm (Healey, Jenkins & Zetter 2007, 11-12).

Since 2004 assumptions about research-based learning and teaching excellence have become commonplace in English higher education, with claims regarding research-led teaching prevalent throughout the sector and initiatives to develop learners as researchers and co-researchers growing, much of this informed the scholarship of teaching and learning (Zamorsky 2002; Healey 2005; Hughes 2005; Little et. al. 2007; Gunn & Fisk 2013). Writing on the context and influence of the Boyer Commission report, Katkin (2003, 33) argues that the implementation of its vision of research-informed teaching has been limited in scope because imposed from the top-down, primarily for marketing purposes. Skelton (2005, 67), however, criticizes the very discourse of research-led teaching excellence itself as problematically associated with elitism and privilege. In this context, we should note how the dominance of research-led teaching excellence has been endorsed and in part driven by the influence and interests of elite English universities belonging to the more research-intensive Russell Group, who have (House of Commons Business, Innovation and Skills Committee 2009, Ev. 428; Russell Group; LSE 2011) couched the benefits of such learning and teaching in terms that resonate with human capital theories of the learning society, including valued-added benefits such as wage premiums relating to the development independence of thought, entrepreneurial and transferable skills, and the ability to handle uncertainty and new problems central to rapidly evolving workplaces of the knowledge-economy.

My contention here is, therefore, that what Readings calls the ‘Americanization’ of higher education functions as a euphemism for the application of neoclassical economic theories of capital to activities such as learning, research and academic scholarship. Significantly, and against some of the critical discourse that focuses on the neoliberal commodification of higher education, this doesn’t simply reduce contemporary higher education to what Readings (1996, 6 & 21) characterizes as a purely bureaucratic corporation, a posthistorical and non-ideological entity disconnected from the historical project of the nation-state; nor does it simply envision the student, in a context in which teaching is supposedly considered entirely quantified and undervalued in favour of research, ‘entirely as consumer’ (Readings 1996, 1 & 27). What is overlooked by such analyses, as the historical anxieties about the learning society demonstrate, is how the focus on *quality* of education and on teaching excellence are connected to the need for state-directed interventions within the education industry in order to increase national productivity in the interests of capital, in a way that conceives of learning as a form of productive investment and therefore situates and obligates the student primarily as *producer*: of their own – and collectively, the nation’s – future income and, significantly, of their own learning.

1. **Scholarship of Teaching and Teaching-Led Research**

This point can be clarified by briefly turning to more critical accounts of the ‘new capitalism’ that are contemporaneous with the emergence of human capital theory. In his writings from this period, for example, the critical theorist Jürgen Habermas (1973, 195-197; 1976, 55-57) contextualizes the increasing involvement of the state in organizing and administering the production of ‘collective commodities’ in terms of a response to the increasing complexity of the spheres of commodity exchange and social production, the need for increasing self-regulation of social domains to ensure systematic stability in response to the threat of Soviet socialism (“Americanization”), and of capitalism’s approaching the natural limits to the generation of absolute surplus value through ‘physical force, lengthening the working day, recruiting underpaid labour forces (women, children), etc.’ As an increasing proportion of capital is invested in fixed infrastructural costs such as technology, the attendant fall of that invested in human labour leads to what Marx called the tendency of the rate of profit to fall, in line with principle that human labour is productive of the value of commodities. Late capitalism responds to this economic situation, Claus Offe (1973) writes, by attempting to increase the productivity of labour through the use of bureaucratic workers and civil servants of the welfare state. The increasing necessity for centralized organization, administration and political mediation to stabilize commodity exchange has seen the reciprocal interlocking of civil society and state within a state-regulated capitalism, Habermas (1960, 195; xxxx 237; 1973, 55-57) argues. This gives rise to a public sector responsible for the state-subsidized production of ‘collective commodities’ of the material and immaterial infrastructure upon which the private sector belongs. This enables, for example, an increase in relative surplus value by heightening the productivity of labour for capital through the development of the technical forces of production (most obviously, for example, public systems of transport and communication).

As Offe (1984: 99; 1970: 111; 1972: 324-5; 1973: 109-110) explains, state power is increasingly required to ‘politically regulate who is and who is not a wage-labourer’ on the labour market and to transform dispossessed labour power into the commodity form inherent to “active” wage-labour through education. Friedrich Pollock (1965: 4-6; 70-1; 204-6) believed automation lead to the necessity of increasing the average level of intelligence of future workers by radically improving and changing educational facilities from childhood onward. Such education would need to focus in particular on providing a good knowledge of mathematics and science, as well as more specialized training to overcome a shortage of engineers and technicians, but it would also be necessary, given the great sense of responsibility required to operate within and identify with automated workplaces, to teach people how “to get more out of life and to be better citizens”’ (Pollock, 1965: 205-6). In particular, ‘the teacher expands a kind of labour power which, without itself being a commodity, may have the purpose of educating labour which is a commodity’ (Offe, 1973). This is also made possible, Habermas argues, through the ‘governmental organization of the educational system, which raises the productivity of human labour through qualification,’ an example of state investment in ‘reflexive labour,’ ‘labour applied to itself with the aim of increasing the productivity of labour.’ This labour which is ‘not productive in the sense of the direct production of surplus value’ but indirectly productive of surplus value to the extent it ‘systematically alters conditions under which the surplus value can be appropriated from productive labour.’ With this ‘systematically managed expansion of the system of continuing education,’ for example, academic labour shifts from being ‘a collective natural commodity’ to being ‘internalized in the economy cycle’ as ‘a component of the production process itself, for ‘the state (or private enterprise) now expands capital to purchase the indirectly productive labour power of scientists, engineers, teachers, etc. and to transform the products of their labour into cost-cutting commodities’.

By focusing on the *capital* component in labour – such that ‘every worker …is now a capitalist’ (Bowles and Gintis 1975, 74) – human capital theory obscures both the specific *labour* component of labour (i.e. labour power) and its primary status as a *commodity* within the capitalist system (cf. Bowles and Gintis 1975; Harvey 2014). In providing a ‘political economy of labour power,’ Kluge and Negt (1981: 108, 135-6; 2014: n15, 7, 35) focus on labour capacities as ‘autonomously protected reserves of labour power’ within the libidinal economy of living bodies; reserves which, unknown to consciousness, contain new forms of self-regulation and direction that constitute ‘countercapital’. These societal competencies provide an alternative to vocational skills that education for productivity insists upon, permitting learners to understand existing relations within social life and initiate necessary reframing processes to rethink them (Negt 1993: 662; 1986: 35). Seeking to determine the contradiction between capital and labour anew from the side of living labour rather than, as Marx had done, capital, Kluge and Negt’s work therefore provides a powerful inversion of theories of human capital that have sought to transform education in the pursuit of economic productivity.

Analyses of the learning society or the knowledge economy that proceed from a critique of political economy, help avoid the elision of class antagonism by focusing on labour power as a commodity: reminding us, for example, that wages on the labour market do not straightforwardly reward calculated investments of time and effort by the worker but are determined in other ways through the ownership of (non-human) capital by the capitalist, or through the social reproduction of inequalities through the exercise of political power exerted over the state and educational apparatus.[[9]](#footnote-9) In addition, human capital theories of education also tend to overlook labour power in education via the central involvement of the teacher and the activity of teaching. As a consequence, such theories inevitably tend to promote theories of *learning* rather than *teaching*.

Rather than advocating some more authentic practice of research-informed teaching or separating teaching from research entirely, this final section will instead return to and reconsider Boyer’s concept of the scholarship of teaching in order to oppose the assumption, underpinned by notions of productivity, that teaching excellence necessarily flows from excellence in research.

As Healey (2005, 189) points out, Boyer did not clearly define the idea of scholarship of teaching, but in agreement with others (Martin et. al. 1999; Kreber and Cranton 2000; Brew 2006) claims that it is commonly used to indicate engagement with scholarly contributions on teaching and learning, reflection on one’s own teaching and student learning, and communication and dissemination of theory and practice about teaching and learning. Boyer (1990) claimed this form of scholarship is particularly appropriate for professionals working in community colleges, referring to Vaughan’s claim that working in research mode during the evaluation and improving of teaching leads to the idea of the “teaching researcher” (Boyer 1988, 27) and to Cross’s idea of the “classroom researcher” who is ‘involved in the evaluation of his or her own teaching and learning, even as it takes place’. Cross and Steadman (1996, 1-2) subsequently developed these ideas beyond the ‘scant attention’ given to the scholarship of teaching in Boyer’s work, characterizing the scholarship of the classroom researcher as ‘ongoing and cumulative intellectual enquiry by classroom teachers into the nature of teaching and learning in their own classrooms.’ As consequence, the scholarship of teaching and learning has largely come to indicate pedagogic research in a way that accepts dominant ideas about research, the researcher and the way in which research influences teaching.

Boyer’s concept of the scholarship of teaching contains, however, a more radical rethinking of research and its relationship to teaching that has been largely undeveloped. For Boyer (1990, 23-4), understanding the activity of teaching as a form of professional scholarship involves recognizing that teaching ‘both educates and entices future scholars,’ that it ‘means not only transmitting knowledge, but *transforming* and *extending* it’, and that ‘good teaching means that faculty, as scholars, are also learners …pushed in creative new directions.’ It should be noted, first, that this retains the nexus between teaching and research. Even in liberal art colleges where teaching is the focus, Boyer argues (1990, 59-60), time and funding should be available for faculty members to focus on research projects; unlike proposals contained in the Dearing Report and the 2011 White Paper, this recommendation doesn’t seek to dissuade teacher-intensive institutes from research activity nor explicitly seek to restrict this scholarship to pedagogic research.

Boyer’s remarks also imply a positive impact from teaching upon research, encouraging scholars to be more creative researchers capable of transforming and extending knowledge in new ways in the process of enticing future scholars. Much of this incorporates and overlaps with perhaps one of the least influential aspects of Boyer’s work: the recognition of integration as a form of scholarship that extends the dissemination of academic knowledge in more open, accessible, public and popular ways. Boyer’s overlapping forms of scholarship entail a conception of teaching that not only becomes the object *of* a traditional understanding of research (in relation to discovery *about* teaching encouraged by the existing literature on the scholarship of learning and teaching and the classroom researcher) but, through the activity of integration connected to increasingly diverse group of students within popular systems of mass higher education, discovery that follows *from* teaching, involving both the teacher and students as agents in a different kind of knowledge production.

In this context, Skelton (2005, 65) and Johnes (2006, 29-30) have noted a number of institutions that are developing a reputation for what, as an inversion of the usual assumption about influence, has been termed teaching-led research. This notion of teaching-led research is not new, although it has – for the reasons outlined – received relatively little attention or consideration.[[10]](#footnote-10) Harland (2016), for example, employs the term as a way of positively rethinking how teaching and research activity might be designed to intersect in a way that ensures a positive enhancement to the teacher’s existing disciplinary research. Thompson (2001), in contrast, advocates the ‘productive traffic’ that follows from teaching *outside* of one’s research areas and allowing teaching to lead or define our research, especially in the way it creatively expands or radically transforms the established canon treated by scholarly research. In addition, Scott (2005, 64) argues that “big ideas” in research have often grown out of intellectual genres quite unlike those of modern research practice (essays, commentaries, public lectures, and blogs rather than academic books and articles). In order to incorporate these different approaches into a more comprehensive and dynamic conception of the research-teaching nexus, we might therefore distinguish between:

1. *teaching-based* research: that takes pedagogy as the object or content of traditional research activities for dissemination via talks and publications.
2. *teaching-informed* research: that is motivated and extended by the interactions that follow from teaching that area of research.
3. *teaching-led* research: that potentially transforms or reforms the character of research and the research disciplines themselves.

Since the notion of teaching-led research is the least familiar of these categories, it may be worth some concluding expansion of these remarks. Scott (2005, 64) helpfully indicates that the critical theorist Walter Benjamin first called for a reinvigoration of research through teaching in the 1930s. Benjamin (1999, 416-9), critically intervening within discussions around traditional conceptions of scholarship and what is now termed the teaching-research nexus, suggests, ‘We ought to re-examine the link between teaching [*Lehre*] and research [*Forschung*] on which traditional academic activity is based …we should not look to research to lead to a revival in teaching; instead it is more important to strive with a certain intransigence for an – albeit very indirect – improvement in research to emerge from teaching.’

For Benjamin (1999, 461), this responds to the contemporary ‘crisis of education,’ which arises from the fact traditional scholarship had lost sight of its ‘pedagogical [*didaktische*] task’. If there are ‘still university teachers who possess exact knowledge and exact skills, but it has already become impossible for them to transmit this knowledge further …this illustrates the truth that the transmissibility of knowledge does not depend just on its wealth and exactness’ (Benjamin 1999, 291). Traditional scholarly subjects therefore need to be emancipated from the ‘forms in which such scholarly acquisition took place’: the lecture, book or article, which – even when concessions to popularity are made by appealing to shared experience or omitting the more difficult lines of thought – remain formally identical with the traditional dissemination of scholarly research (Benjamin 1999, 419). Benjamin calls for educators to embrace the pedagogical potential of new media and to experiment with popular forms of education to ensure not the correct *transmission* of the content of knowledge but its formal *transmissibility*.

Furthermore, as Benjamin (1999, 419-20) makes clear, this will occur ‘only …because in principle teaching is capable of adapting to a new strata of students in such a way that a rearrangement of the subject matter would give rise to entirely new forms of knowledge.’ To meet the demands of a growing public, connected through the pedagogic potential of new media and the expansion of new kinds of educational institutions, it is therefore necessary not only to mobilize knowledge in the direction of the public (to render knowledge *popular*), but to actively mobilize the public in the direction of knowledge (to give legitimacy to *popular* *knowledge*) (Benjamin 2014, 369-371). This demands, Benjamin (2014, 369-471) insists, a total transformation and rearrangement of the material in order to convince the wider public that their interests possess objective value for the material itself and their questions call for new scholarly findings. In establishing ‘rigorous new forms’ of dissemination, that encourage what he calls a more enterprising form of research and a ‘less banal, more considered’ form of learning, both the content or substance of knowledge and the pursuit of knowledge itself become radically transformed (Benjamin 1999, 419; 2014, 369-370).

Within this context, the massification of contemporary higher education, and the increasing significance attached to teaching and teaching excellence to an increasingly broad and diverse student body, therefore pose new demands upon teaching that simultaneous present new possibilities for research. This gives rise a *transdisciplinary* impulse that has the potential to create new fields of research and to radically transform and merge existing disciplines.[[11]](#footnote-11) Peter Osborne (2010), for example, has pointed out that it was often in the old polytechnics and what became the new universities, with their significantly distinct student demographic, that creative and innovative developments in the research disciplines developed, and ‘new theoretical paradigms in the humanities – like Cultural Studies, for example – developed’ (we might also include the development of Education Studies itself as part of the transformation of teacher training following the expansion of education after the Second World War).

To conclude, the contours of a notion of teaching*-*based, teaching-informed and teaching-led research outlined here are intended to critically intervene within the educational discourse of teaching excellence and research-led teaching in order to reimagine the teaching-research nexus anew. It does not insist that every academic involved in teaching must be a researcher but, under conditions in which more and more academics are required to be or have a personal interest in becoming researchers, it seeks to find ways to rethink how the knowledge that constitutes it might be creatively or indeed destructively transformed by the reflexive labour of teaching and learning.

Such a perspective suggests one of the positive learning outcomes of teaching might be evaluated in terms that have no intrinsic relationship to the productivity or human capital of students who are learning. If this leaves such a conception open to accusations of either a disregard for quality teaching and student learning outcomes or even the exploitation of students themselves, we should recall the extent to which existing conceptions of research-informed teaching are driven primarily by the interests of elite universities, concerned with ensuring their own competitive advantage, and the needs of a learning society encouraged by governments anxious to increase economic productivity, as well as the extent to which an increasing focus on teaching excellence may be irrelevant to, or even work to the detriment of, dimensions of quality in education.

If students are nonetheless still integrated into research activity, this is not necessarily on the model of them *becoming* traditional researchers, in ways that emphasize their higher level productivity in terms of value-added learning, nor on a relationship between research and teaching that evaluates the benefits of this integration in terms of outcomes that could be measured by existing proxies for teaching excellence (nor, indeed, given the focus on the *form* or even *deforming* rather than *content* of research, existing proxies for research excellence, which are likely to fall foul of disciplinary subject areas). A growing national and institutional policy focus on teaching, and anxiety over the student experience, presents the chance for new narratives of investment in learning and teaching to develop beyond the hegemonic reach of research excellence and research-intensive universities. From this perspective, the central problem of the Teaching Excellence Framework – that it doesn’t evaluate quality teaching – might be reimagined as a tactical opportunity for students, teachers and researchers alike.

**References**

Becker, Gary S. 1961. Underinvestment in College Education? *The American Economic Review* 50(2): 346-354.

Becker, Gary S. 1962. Investment in Human Capital: A Theoretical Analysis. *The Journal of Political Economy*, 70(5), Issue 2: 9-49.

Benjamin, Walter. 1999. *Selected Writings. Volume 2: 1927-1934*. Cambridge MA.: Harvard University Press.

Benjamin, Walter. 2014. *Radio Benjamin*. London: Verso.

Bowles, Samuel & Gintis, Herbert. 1975. The Problem with Human Capital Theory: A Marxian Critique. *The American Economic Review* 65(2): 74-82.

Boyer, Ernest L. 1978. The Federal Stake in a Learning Society: An Interview with Ernest L. Boyer. *Change: The Magazine of Learning* 10(5): 21-26.

Boyer, Ernest L. 1985a. Message to the Nation: Do Not Adjust This Vision. *Times Higher Education Supplement*. (July 5th 1985).

Boyer, Ernest L. 1985b. Introduction. In Frank Newman, *Higher Education and the American Resurgence*, ix-xii. Princeton: Carnegie Foundation for the Advancement of Teaching.

Boyer, Ernest L. 1990. *Scholarship Reconsidered: Priorities of the Professoriate*. Princeton: The Carnegie Foundation for the Advancement of Teaching.

Boyer, Ernest L. 1991. Elementary and secondary education. In *Human Capital and America’s Future: An Economic Strategy for the 1990s*, eds. David W. Hornbeck and Lester M. Salamon, 171-192. Baltimore: John Hopkins University Press.

BIS (Department of Business, Innovation and Skills). 2011. *Higher Education: Students at the Heart of the System.* (June 2011).

BIS (Department of Business, Innovation and Skills). 2015. *Fulfilling our Potential: Teaching Excellence, Social Mobility and Student Choice.* (November 2015).

BIS (Department of Business, Innovation and Skills). 2016. *Success as a Knowledge Economy: Teaching Excellence, Social Mobility and Student Choice*. (May 2016).

Brew, Angela. 2006. *Research and Teaching: Beyond the Divide*. New York: Palgrave Macmillan.

Callinan, Carol, John G. Sharp and Brian Hemmings. 2012. Capacity building for research-led teaching and teaching-led research: The impact of confidence, career stage and other factors. In *What is Research-Led Teaching? Multi-disciplinary Perspectives*, eds. Alisa Miller, John G. Sharp and Jeremy Strong, 30-37. Consortium for Research Excellence, Support and Training.

Carnegie Foundation for the Advancement of Teaching. 1985. *Sustaining the Vision: A Statement on the Federal Role in Higher Education*. Princeton: The Carnegie Foundation.

Little, Brenda, William Locke, Jan Parker and John Richardson. 2007. *Excellence in Teaching and Learning: a review of literature for the Higher Education Academy*. Centre for Higher Education Research and Information at the Open University. (July 2007).

Colbeck, C. L. 1998. Merging the seamless blend: How faculty integrate teaching and research. *The Journal of Higher Education* 96(6): 647-671.

Commission on the Future of Community Colleges. 1988. *Building Communities: A Vision for a New Century*. Washington, D.C.: American Association of Community and Junior Colleges.

Cross, K. Patricia and Mimi Harris Steadman. 1996. *Classroom Research: Implementing the Scholarship of Teaching*. San Francisco: Jossey-Bass Publishers.

Dearing, Ron. 1994. *The National Curriculum and its Assessment*. London: School Curriculum and Assessment Authority.

Dearing, Ron. 1997. *Higher Education in the learning society*. London, Her Majesty's Stationery Office.

DOE (Department of Education). 2016a. *Teaching Excellence Framework: year two specification.* (September 2016).

DOE (Department of Education). 2016b. *Teaching Excellence Framework: year two and beyond Government technical consultation response.* (September 2016)

Elton, Lewis. 2001. Research and Teaching: conditions for a positive link. *Teaching in Higher Education* 6(1): 43-56.

Fanghanel, Joelle. 2007. Teaching Excellence in context: Drawing from a socio-cultural approach. In *International perspectives on teaching excellence in higher education*, ed. Alan Skelton, 197-212. London: Routledge.

Gibbs, Graham. 2010. *Dimensions of quality*. York: The Higher Education Academy.

Griffiths, Ron. 2004. Knowledge production and the research–teaching nexus: the case of the built environment disciplines*. Studies in Higher Education* 29(6): 709-726.

Gunn, Vicky and Anna Fisk. 2013. *Considering teaching excellence in higher education: 2007-2013*. York: The Higher Education Academy.

Habermas, Jürgen. 1973. Between Philosophy and Science: Marxism as Critique. In *Theory and Practice*, 195-252. London: Beacon Press.

Habermas, Jürgen. 1976. *Legitimation Crisis*. Polity Press, Cambridge.

Harland, Tony. 2016. Teaching to enhance research. *Higher Education Research & Development* 35(3): 461-472.

Harvey, David. 2014. *Seventeen Contradictions and The End of Capitalism*. London: Profile Books.

Hattie, John and Herbert W. Marsh. 1996. The relationship between research and teaching—a meta-analysis. *Review of Educational Research* 66: 507–542.

Hattie, John and Herbert W. Marsh. 2004. *One Journey to Unravel the Relationship between Research and Teaching. Conference Paper*. Conference presentation. Retrieved from [https://cdn.auckland.ac.nz/assets/education/hattie/docs/relationship-between-research-and-teaching-(2004).pdf](https://cdn.auckland.ac.nz/assets/education/hattie/docs/relationship-between-research-and-teaching-%282004%29.pdf).

Healey, Mick. 2005. Linking Research and Teaching to Benefit Student Learning. *Journal of Geography in Higher Education* 29(2): 183-201.

Healey, Mick, Alan Jenkins and Roger Zetter 2007. *Linking Teaching and Research in Disciplines and Departments*. York: The Higher Education Academy.

HM Treasury. 2015. *Fixing the foundations: Creating a more prosperous nation*. (July 2015).

House of Commons Business, Innovation and Skills Committee. 2009. *Students and Universities: Eleventh Report of Session 2008-9. Volume II.*

House of Commons Business, Innovation and Skills Committee. 2016. *The Teaching Excellence Framework: Assessing quality in Higher Education Third Report of Session 2015–16*.

Hutchins, Robert Maynard. 1968. *The Learning Society*. New York, Washington & London: F. A Praeger.

Hughes, Mark. 2005. The Mythology of Research and Teaching Relationships in Universities. In *Reshaping the university: new relationships between research, scholarship and teaching*, ed. Ronald Barnett, 14-26. Maidenhead: McGraw-Hill/Open University Press.

Jacobsen, Douglas and Rhonda Hustedt Jacobsen. 2014. The Religious Roots of Ernest L. Boyer's Educational Vision: A Theology of Public Pietism. *Christian Higher Education* 13(1): 17-28.

Jantsch, Erich. 1970. Inter- and Transdisciplinary University: A systems approach to education and innovation. *Policy Sciences* 1(1): 403-428.

Jantsch, Erich. 1972. Vers l’interdisciplinarité et la transdisciplinarité dans l’enseignement et l’innovation [Towards interdisciplinarity and transdisciplinarity in education and innovation]. In *Interdisciplinarity: Problems of Teaching and Research*, eds. L. Apostel, G. Berger, A. Briggs and G. Michaud, 127-139. Paris: OECD.

Jenkins, Alan and Mick Healey. 2005. *Institutional strategies to link teaching and research.* York: The Higher Education Academy.

Johnes, Martin. 2006. Students Perceptions of Research in Teaching-Led Higher Education. *Journal of Hospitality, Leisure, Sport and Tourism Education* 5(1): 28-40.

Katkin, Wendy. 2003. The Boyer Commission Report and Its Impact on Undergraduate Research. *New Directions For Teaching and Learning* 93: 19-38.

Kemp-King, Stephen. 2016. *The Graduate Premium: manna, myth or plain mis-selling*. London: Intergenerational Foundation.

Kernohan, David. 2015. The TEF’s first assessment. *Wonkhe*. Retrieved from <http://wonkhe.com/blogs/the-tefs-first-assessment>.

Kreber, Carolin and Patricia A. Cranton. 2000. Exploring the scholarship of teaching. *The Journal of Higher Education* 71(4): 476-95.

LSE. 2011. Research led teaching: A conference for Russell Group institutions hosted at LSE. *Teaching Matters* (March 2011). Retrieved from [http://www.lse.ac.uk/intranet/LSEServices/TLC/Publication%20files/RLT-feature-within-TM-(amended-p.1)-FINAL.pdf](http://www.lse.ac.uk/intranet/LSEServices/TLC/Publication%20files/RLT-feature-within-TM-%28amended-p.1%29-FINAL.pdf).

Martin, E., J. Benjamin, M. Prosser and K. Trigwell. 1999. Scholarship of teaching: a study of the approaches of academic staff. In *Improving Student Learning: Improving Student Learning Outcomes*. *Proceedings of the 1998 6th International Symposium, Oxford Centre for Staff and Learning Development*, ed. C. Rust, ed., 326–331. Oxford: Oxford Brookes University.

McGettigan, Andrew. 2015. *The Treasury View of HE: variable human capital investment. PERC Papers Series: Paper No. 6.*

National Commission on Excellence in Education. 1983. *A Nation at Risk: The Imperative for Educational Reform*. (April 1983).

Neumann, R. 1992. Perceptions of the teaching-research nexus: a framework for analyses. *Higher Education* 23: 159-171.

Osborne, Peter. 2010. Privatization as Anti-Politics: Interview with Peter Osborne. *Reclamations* 3. Retrived from <http://reclamationsjournal.org/issue03_peter_osborne.htm>.

Osborne, Peter. 2011. Philosophy after Theory: Transdisciplinarity and the New. In *Theory After “Theory”*, eds. Derek Attridge and Jane Elliot, 19-33. London: Routledge.

Piaget, Jean. 1972. The Epistemology of Interdisciplinary Relationships. In *Interdisciplinarity: Problems of Teaching and Research*, eds. L. Apostel, G. Berger, A. Briggs and G. Michaud, 127-139. Paris: OECD.

Readings, Bill. 1996. *The University in Ruins*. Cambridge MA. & London: Harvard University Press.

Rice, R. Eugene. 1991. The New American Scholar: Scholarship and the Purposes of the University. *Metropolitan Universities* 1: 7-18.

Robertson, J. 2007. Beyond the “research/teaching nexus”: Exploring the complexity of academic experience. *Studies in Higher Education* 32(5): 541-556.

Russell Group. n.d. *Research-led learning: the heart of a Russell Group university experience.* Retrieved from <http://russellgroup.ac.uk/media/5048/4learning-in-a-research-intensive-environment.pdf>.

Scott, Peter. 2005. Divergence or Convergence? The Links between Teaching and Research in Mass Higher Education. In *Reshaping the university: new relationships between research, scholarship and teaching*, ed. Ronald Barnett, 53-66. Maidenhead: McGraw-Hill/Open University Press.

Schultz, Theodore W. 1961. Investment in Human Capital. *The American Economic Review* 51(1): 1-17.

Schultz, Theodore W. 1972. Human Capital: Policy Issues and Research Opportunities. In *Economic Research: Retrospect and Prospect. Volume 6: Human Resources*, ed. Theodore W. Schultz. National Bureau of Economic Research.

Skelton, Alan, 2005. *Understanding Teaching Excellence in Higher Education: Towards a Critical Approach*. London: Routledge.

Skelton, Alan, ed. 2007. *International perspectives on teaching excellence in higher education*. London: Routledge.

Smeby, Jens-Christian. 1998. Knowledge production and knowledge transmission: the interaction between research and teaching at universities. *Teaching in Higher Education* 3(1): 5-20.

Thompson, Ann. 2001. Research-led Teaching or Teaching-led Research? *The Higher Education Academy English Subject Centre* *Newsletter* 1. (May 2001).

University of Bedfordshire. 2010. *A Guide to Research Informed Teaching (RiT) and Research Informed Learning (RiL)*. (April 2010). Retrieved from <https://www.beds.ac.uk/__data/assets/pdf_file/0010/273772/Guide-9-A-Guide-to-Research-Informed-Teaching-and-Research-Informed-Learning.pdf>.

Zamorski, Barbara. 2002. Research-led Teaching and Learning in Higher Education: A case. *Teaching in Higher Education* 7(4): 411-427.

1. From 2017, teaching excellence will be evaluated against teaching quality (TQ) measured according to student satisfaction with teaching and assessment and feedback from the National Student Survey; learning environment (LE) measured according to student satisfaction with academic support from the same survey and from continuation rates; student outcomes and learning gain (SO), which are currently reduced merely to employment figures, now including a highly-skilled employment metric, according to the Destination of Leavers from Higher Education survey and split by and benchmarked against type of course and students characteristics (other measures of learning-gain are still in development, with studies piloted by the Higher Education Funding Council for England that may look into contact hours and teaching intensity); contextual evidence on circumstances and objectives provided by institutions (DOE 2016a, 18-20; BIS 2016, 47; House of Commons Business, Innovation and Skills Committee 2016, 9). [↑](#footnote-ref-1)
2. A brief reference in the 2011 White Paper (BIS 2011, 26-27) to Graham Gibbs’s report on *Dimension of Quality*, is undermined by the fact that Gibbs (2010) speaks not of excellence but rather quality in teaching, and none of the dimensions of teaching quality identified by Gibbs are currently evaluated in the measurements for the TEF. [↑](#footnote-ref-2)
3. Critics of the TEF have pointed out that, because it establishes no connection between individual teaching performance (nor even, until the move to subject level in 2019, teaching at departmental or faculty level, such as there is in the Research Excellence Framework) and institutional assessment, there is little to act as a direct driver of teaching quality (Kernohan 2016), and that the metrics used to evaluate excellence could even drive down the quality of teaching, since data being measured might encourage a “gaming” of the system to make it easier for students to progress and to reward student satisfaction rather than academic development (House of Commons Business, Innovation and Skills Committee 2016, 7-9). Similarly, the incentives used to reward teaching excellence raise problems in relation to quality teaching, not least because the consequence of students rating teaching and learning highly is likely to be increased tuition fees (the National Union of Students is currently trying to coordinate a boycott of the National Student Survey in response to the TEF) and cohort sizes for future students (contradicting one of Gibbs’s key dimensions of quality teaching). [↑](#footnote-ref-3)
4. Prior to the TEF, for example, the government (BIS 2011, 32) had hoped ‘the student experience’ alone would informally provide a comparable lever (a proxy even further removed from quality teaching), suggesting that ‘Students will increasingly use the instant communication tools of the twenty first century such as Twitter and Facebook to share their views on their student experience with their friends, families and the wider world,’ such that ‘Better informed students will take their custom to the places offering good value for money. In this way, excellent teaching will be placed back at the heart of every student’s university experience’. Similarly, the TEF is designed to create a more variated market ostensibly through the introduction of a differential fee uplift (in line with the rate of inflation for those achieving a Bronze rating or higher and, from 2018 onwards, at 50% of forecasted inflation or in line with inflation for those that achieve the highest ratings, which is more practically a fee squeeze for most), but probably primarily as a reputational marketing tool for institutions to compete over increased student numbers following the abolition of the numbers cap for established HE institutions in 2015 (BIS 2016, 51) [↑](#footnote-ref-4)
5. While Dearing’s 1994 review of *The National Curriculum and its Assessment* in schools contains no mentions of teaching excellence or of other key phrases utilized in the Dearing Report, such as the ‘scholarship of learning and teaching’ or the ‘learning society’ (not even in the review’s discussion of the assessment of teachers and of the value added by schools),these terms become central to the report on higher education three years later. [↑](#footnote-ref-5)
6. *Building Communities* (Commission on the Future of Community Colleges 1988), the report of the Commission of the Future of Community Colleges of which Boyer was Chair, went on to recommend the idea that excellence in teaching needed to be formally recognized and rewarded in teaching-intensive community colleges, while Boyer’s *Scholarship Reconsidered* (1990) generalized and developed these ideas across the American higher education system more broadly, calling for an expansion of the conception of academic scholarship beyond the ‘discovery’ of research to include integration, application and teaching, with excellence a yardstick against which all forms of scholarship are to be measured and evaluated. [↑](#footnote-ref-6)
7. Much of the early research on investment in education and other kinds of human capital was sponsored by the National Bureau of Research with support from the Carnegie Corporation of New York (Schultz 1972, 17, 26, 59; Becker 1962, 9, n.1), which was closely associated with the Carnegie Foundation for the Advancement of Teaching prior to its separation, with Boyer as president, in 1979, and both the Carnegie Corporation and Foundation continues to promote such research. In a contribution on ‘Elementary and second education’ to *Human Capital and America’s Future: An Economic Strategy for the 90s*, for example, Boyer (1991, 171) insisted that ‘education and the national economy are inextricably connected.’ [↑](#footnote-ref-7)
8. McGettigan (2015, 6) also suggest that on this model of human capital, ‘funding will increasingly follow the creditworthiness of institutions and individuals, rather than the costs of course delivery’ (it should be added the quantitative metrics currently proposed to measure teaching excellence in the TEF are ideally aligned to enable this). [↑](#footnote-ref-8)
9. For these reasons, the expansion of educational opportunities may be favourable to the capitalist class in terms of the production of an increasingly knowledgeable, skilled and self-motivated workforce that may nonetheless also become increasingly impoverished (indeed, in ways that may have enriched the owners of non-human capital invested in the education industry) and whose earning potential may nonetheless depreciate quicker than estimated or even stagnate in a crowded labour market (such as recent reports (Kemp-King 2016) on the decline of the graduate premium have suggested). [↑](#footnote-ref-9)
10. Although Healey (2005, 197, n.1), for example, notes that the research-teaching nexus works in both directions, he chooses to focus only on the impact of research upon teaching and of the benefits to undergraduate students. In a 2012 report by the Consortium for Research Excellence, Support and Training, Callinan, Sharp and Hemmings (2012) mention several times the idea of teaching-led and teaching-focused research but don’t define or expand on this term. Acknowledging that few studies have directly examined how teaching relates to and enhances research, Harland (2016) draws attention to the work of Colbeck (1998), Brew (2006) and Robertson (2007). In empirical research on the impact of teaching on research, Robertson (2007, 549) concludes that ‘those who had not made an automatic link from teaching to research generally acknowledged that there was a connection which supported and enhanced their research endeavours’ and that this enhancement was especially noted by those working in the humanities, a perception also noted by Smeby (1998, 14), who categorizes such interaction as *indirect* when teaching helps with understanding and maintaining knowledge of the breadth of the subject and *direct* when teaching generates specific ideas and problems followed up in research. Neumann (1992) also points out that for those involved in academic research, teaching often provides a continually fresh source of contact with the wider world [↑](#footnote-ref-10)
11. The concept of trandisciplinarity is introduced by educational theorists Jantsch (1970, 1972) and Piaget (1972) in the 1970s. The term has been critically recuperated more recently by Osborne (2011) and others to describe a philosophical impulse exemplified in the research project of the first generation of Frankfurt School critical theorists, such as Adorno, Horkheimer and Benjamin, in the 1930s. The link between teaching and transdisciplinarity, anticipated in Benjamin’s critical theory of education, is, however, omitted in Jantsch, Piaget and Osborne’s use of the term. [↑](#footnote-ref-11)