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Responses to impact in the REF: implications for pedagogic and policy-related research in HE

Dr Catherine O'Connell Centre for Education and Policy Analysis, Liverpool Hope University

Abstract

Research impact is a persistent policy concern for governments and research stakeholders internationally. As part of a wider policy agenda, a research impact indicator was introduced as part of the UK Research Excellence Framework (REF) in 2010. Through an analysis of impact cases studies of HE-focused educational research, and interviews conducted with academics engaged in this field of research, the paper shares insights on ways this new indicator is perceived to be influencing perceptions of, and practices relating to, pedagogic and policy-related research. The analysis illustrates the forms of research being used to demonstrate impact in, and on, higher education and demonstrates a greater diversity in the forms and spheres of impact represented than anticipated by earlier research studies. A variety conceptual and structural obstacles in the policy formulation are acknowledged. However, the analysis demonstrates considerable scope for organisational practices to mediate responses to impact. The present study identifies implications for senior managers in terms of how the effects of the indicator are mediated through institutional practices.

Introduction

In 2010 a new impact indicator was introduced to the UK Research Excellence Framework. This is reflective of a contemporary concern across research governance frameworks internationally. However, unlike countries including Australia and the Netherlands where an impact orientation is also reflected in research evaluation, the impact indicator in the UK framework accounts for 20% of the overall quality assessment and remunerative outcome. With the broadened emphasis beyond research output and environment to incorporate impact, there has been a proliferation of strategic and tactical institutional responses to the component metrics (Marginson, 2014, Chubb & Watermeyer, 2016). Considerable debate has ensued on whether impact, as demonstrated by qualitative case studies, can provide a counter-point to quantitative research outputs and offer a new narrative space for the sector to define broader conceptions of value and purpose than those that are represented in existing research metrics or whether it induces a new form of performativity.

For many academics, impact is a problematic concept, connoting one-way influence and a particular form of knowledge production more closely aligned with the concept of 'Mode 1' knowledge (Gibbons et al 1994). However, there is a perceived potential in the REF guidance criteria for impact to enable differentiated forms of research (Reed, 2016). Preliminary analyses of the corpus of case studies available from 2014 REF submissions suggests there are particularly dominant narratives of impact which favour elite (top-down) conceptions of policy and practice impact. In an analysis of education impact studies Cain & Allan (2016) point to an apparent conservatism in which

educational research impact on practice is largely effected through intermediaries and policy impact is conceptualised in hierarchical ways.

Within the field of research focused on higher education, the REF guidance parameters pose particular and significant challenges in the requirement to demonstrate impact 'beyond the academy' (REF2014 Guidance). This article examines responses to this new indicator with respect to research which relates to higher education, pedagogic and policy-related. The study gives insight to the forms of research being used to demonstrate impact in, and on, HE, conceptualisations of the policy-practice nexus and, through the narratives of respondents engaged in HE related research, an indication of the ways research practices are being influenced by the impact indicator.

This article contributes to developing understanding of ways that the different levels of evaluation emergent through the REF, in the particular context of HE focused research, mediate responses and shape practices. A growing critique in the academic and professional literature points to an increasing instrumentalism effected by the impact indicator and emphasises conceptual and functional obstacles inherent in the policy formulation (Chubb & Watermeyer 2016; Watermeyer, 2016; Watermeyer & Hedgecoe 2016; Reed 2016). Such critique acknowledges the organisational practices which contribute to these effects but presents a partial account of the space for agency within organisational and individual practice to mediate policy effects. The present study illustrates how organisational practices can impose further parameters which serve to reify particular forms of research activity or can foster greater inclusivity and reach of research practices. The study identifies implications for senior managers in terms of how the effects of the indicator are mediated through institutional practices.

Research assessment and governance

Research impact has been a persistent policy concern for government and stakeholders over the past decade. Political policy attention in the UK context is traced back to the 2006 Warry report, 'Increasing the Economic impact of research councils' (Watermeyer 2016) which emphasised a closer engagement of researcher funders with state and societal stakeholders. Prospective impact potential has been embedded as a feature of research council bidding criteria. However, the REF indicator introduced a retrospective evaluation of impact and offered a detailed rubric for presenting evidence of impact.

The increased focus on impact in various areas of research governance is criticised for eroding the legitimacy of disinterested research, for requiring a closer orientation to the policy priorities of the day, and for being reflective of an intensifying steerage by government and stakeholders (Collini 2012, Ozga 2000). Significant critique is directed towards the conceptual implications associated with impact as it is defined in the REF framework (Watermeyer, 2016). An alternative argument identifies the potential for impact to draw greater attention particular forms of research which had been de-privileged under the existing research assessment framework, and to counteract existing systemic disincentives to bring research to wider communities (Pollard & Oancea, 2010, Million + 2016).

Another level of critique addresses the particular rubric for evidencing impact defined in this policy. In contrast with the prevailing discourse of impact in respect of academic research publishing, where impact is defined as academic reach in the form of citations, the concept is defined explicitly as impact beyond academia (2011: 26). In REF guidance, the rubric specifies the quality threshold of underpinning research; the template for impact case studies including, retrospective timespan of impact claims, the number of case studies which must be submitted 'per capita'; and guidance on

the way in which impact developed through university collaboration can be evidenced. Scope is given in terms of the order in which impact is derived; either preceding, or subsequent to, the research output. In the REF's determination of a minimum threshold of 2* underpinning research, critique is directed towards the formulation for the implication of rewarding impact from 'less than excellent research' (Watermeyer, 2016: 207).

Through interviews with research centre directors in a research intensive university Watermeyer (2014: 364) identifies a range of factors mitigating academic responses to impact including individual research orientation (academic prioritisation, capacity and compatibility, ownership) and organisational support (time, tracking). Significant in these accounts was the tendency to frame impact around the activities associated with one's own research with 'little reference to the contributions of other researchers in fostering and harvesting research impact' (ibid: 373) and a lack of connection with the activities of early career researchers, thus creating a potential hierarchy and exclusionary practices.

Recent government and sector commissioned reviews have examined the uses of, and responses to, metrics in research assessments. A review commissioned by the Higher Education Funding Council for England, tasked with examining ways of evaluating research more efficiently and cost effectively, cautioned against attempting to evaluate impact through quantitative indicators (Wilsdon et al, 2015). A current review commissioned by central government is exploring how uses of research metrics are influencing academic careers and career choices (DBIS 2016). These studies acknowledge the unanticipated and unintended effects of such approaches to evaluating research quality. The contributions by sectoral interest groups (so called 'mission groups') to these consultations reflect the long-standing tensions and debates within the sector regarding policies which concentrate research funding resources and those which foster excellence 'wherever it is found' (HEFCE, 2007). The importance of the current policy formulation of REF is emphasised by newer universities, in recognising and supporting a broader range of research such that the process would be 'valuable even if no funding decisions were associated' (Million +, 2016).

Some analyses point to an inherent conservatism in which impact on practice is largely defined through intermediaries and policy impact is conceptualised in hierarchical ways (Cain & Allan, 2016). A revealing study conducted 18 months prior to the 2014 REF by Watermeyer and Hedgcoe (2016) examined peer evaluation of impact in a 'mock REF review'. The study identified emergent notions of impact and illustrated the challenges experienced by reviewers in applying evaluative judgements of impact. Reviewers acknowledged a tendency to use research output as a proxy measure and identified the potential for 'double counting' research outputs in relation to impact. This piece of research drew attention to the conceptual and functional obstacles to evaluation of impact and demonstrated a normative orientation towards excellence in terms of research impact.

A growing critique is evident in the research literature and professional discourse on ways the new indicator is instrumentalising research practices and failing to support those researchers it may have served (Reed, 2016). Critique largely addresses the structural and systemic aspects of this form of research governance. Recent analyses have identified the increasing differentiation in approaches to REF, and the extent of exclusionary practices, in terms of number of staff submitted, in order to optimise REF outcomes (Marginson 2014, Watermeyer 2016). Problemetizing the prevailing critique of research assessment as a top-down mechanism of state control with uniformly negative effects, Oancea (2014) deploys Foucauldian theoretical resources to examine and explain the contradictory effects of this form of research assessment during its evolution. This perspective emphasises the way in which REF, as a governing technology, is based on devolved responsibility and split steering between government, sectoral and institutional level. The empirical study of educational researcher

responses to the preceding research assessment (RAE2008) demonstrated a situation 'not as evenly negative as some of the literature prior RAEs suggested' (ibid: 103).

A focus of interest in this study is upon the responses by academic researchers who relate to higher education as their object of study and the extent to which responses are mediated by personal research orientations or organisational framing of impact strategy. Oancea observed differing responses to impact which were mediated by discipline orientation and mode of research (2013). In Arts and Humanities responses were more likely to be framed by theoretical commitments and discipline conventions. In Social Sciences, respondent orientations to impact tended to relate to modes and methods of research and the extent to which research was theory driven or practice driven, more than discipline-conventions (Oancea 2013: 245). Within the blogosphere, several early proponents of the new impact indicator from the HE research field provided a constructive critique and, among particular groups, expressed a resonance with the particular modes of research which had been underprivileged in previous research assessments (Greenhalgh, 2014).

The research literature provides a rich characterisation of differing responses to impact, mediated by discipline affiliations and organisational practices in the period leading up to the research assessment in 2014. Conflicting viewpoints are represented on the potential of impact to catalyse or destabilise research practices (Oancea 2013:248) in ways which enhance reflexivity and perceptual horizons (Watermeyer 2014: 359) or function as a new form of proscription of academic research (Watermeyer, 2016). At a point in time, 18 months after the reporting of REF outcomes, the study provides insight into ways this new component is shaping research practices in HE studies as a particular field of practice.

Conceptualisations of impact

The extent to which educational research informs policy and practice is an issue of critical concern. Policy influence is acknowledged as a 'prominent way in which research can have wider social impact' (Ashwin & Deem 2015:3). Ozga (2000) charts a declining influence of educational research on central governmental policy making from a high point in 1960s which is attributed, in part, to a disconnect or superficial relationship between education policy research and developments in the theoretical terrain of social science. Policy research, as a consequence, is concerned primarily with implementation- oriented studies than on research which explores the purpose and nature of policy (ibid: 76).

Marginson (1993) draws a distinction is drawn between policy-controlled and self-controlled research; the former responding to pre-given needs and language of policy makers. Self-controlled research, shaped and defined by interests and agendas within the research community, may relate with policy in different ways: through co-incident intersections of interest but also through conceptual influence in the public sphere.

Differing conceptualisations of the policy-practice nexus are articulated by Ball, Maguire and Braun (2011) who examined ways teachers related to policy as policy actors or subjects through orientations which reflected strategies of policy adherence, translation and mediation. Using these analytical categories, Ashwin, Deem & McAlpine (2015) examine policy orientations of educational researchers during the doctoral training process. The study identifies differing ways in which researchers conceptualise policy as either operating at a level separate to the individual or as operating in a series of inter-related levels (ibid: 3). Those researchers who positioned themselves as policy actors, tended to emphasise membership of wider and collective networks of policy makers, practitioners and other agencies. Consequently, Ashwin et al emphasise a need for post-

graduate research programmes to facilitate researchers' adoption of a relational view of policy. It might be anticipated that those academics submitting impact studies are more embedded in academic educational research communities and within policy and practitioner networks but also that these responses are mediated by local organisational practices. However, Watermeyer, noted a tendency of academics to interpret impact in relation to interactions with government thus reflecting 'a rather one-dimensional form of impact as emergent from interactions with a singular research beneficiary/user' (2014: 364).

Saunders (2014) advocates a conceptualisation of research impact as being concerned with creating knowledge resources for new practices. Such a conception implies a broad understanding of contexts where research has relevance and close linkage between research and sites of engagement. Conceivably, in this context, the impact element of the REF poses a challenge and an opportunity: It might offer a counterbalance to inward focused metrics which can run counter to knowledge exchange practices (Pollard & Oancea 2010). Yet, there is the potential, depending on how impact is conceptualised and demonstrated to reinforce traditional hierarchies of institutional prestige and to emphasise particular forms of research as impact fertile.

A mounting critique that REF impact is intensifying instrumentalism in research practices is largely addressed to the conceptual definition and rubric developed at sectoral level. This perspective backgrounds the confluence of factors and organisational practices which amplify or mediate academic responses. Alvesson (2002) counters a growing genre of texts focused on managing cultures and emphasises the reality being that we work 'in cultures'. He identifies the value of activities related to 'cultural maintenance'; of translating and 're-framing' the significance of external events that have resonance and value for the organisation as an important part of everyday organisational activity. Oancea's empirical work draws attention to the mediating practices at organisational level which frame personal responses to research assessment (2014). The current study takes a relational orientation in examining ways in which policy implementation of REF is mediated in organisational contexts.

As a data source the information presented in REF HE impact case studies provides insight in the diversity of funding sources, forms of collaboration and types of impact-oriented activities within the sector. The case studies provide the opportunity to examine how research is conceptualised in relation to policy. In the analysis of the case studies, it was of interest to examine the accounts of impact, pre-planned and linked to particular policy-controlled research (via trajectories of contracted research) and those which represented accounts of self-controlled research and ways in which these intersected with policy and practice. The accounts of interviewees give further insight into ways these conceptualisations and representations of policy are mediated by the rubric of 'REF impact' and the organisational interpretation of this indicator.

Method

The sample of case studies collated for the analysis was determined on the basis of searching through the impact summaries the Education Unit of Analysis and those of cognate disciplines (McCulloch, 2002) to identify those focused on HE research. The second phase of analysis involved scrutiny of the impact study to examine the positioning of research in relation to impact, the scope and forms of the impact claimed and the impact approach articulated. Table 1 details the analytical protocols applied in this part of the analysis.

Impact claim:	Underpinning research:	Impact approach:	
Scrutiny of summary	Scrutiny of sections 2 and 3 of	Scrutiny of sections 4 and 5 of	

paragraph and impact	template (articulation of	impact template: impact details and
designation: Template	underpinning research and	sources to corroborate impact.
provides options of impact	research publications).	
type as: political, cultural		Analytical focus on:
and societal.	Analytical focus on:	,
		Conceptualisations of policy and
Analytical focus on:	Individual on collaborative	practice impact
	research, single institution or	
Reach: international	partnership.	Impact strategy
national, regional		
	Funded, contracted or unfunded	Impact collaborators.
Impact sphere: social	research.	
policy, educational policy		
practice.	Chronology of research outputs in	
	relation to impact activities.	
Level of impact (eg.		
National, sectoral,		
institutional, practitioner)		
Impact hopoficiany or		
Impact beneficiary: eg.		
practitioners, policy		
makers, students,		
employers.		

Table 1: Analytical protocols for analysis of impact case studies

All case study authors in the Education 'unit of analysis' were contacted and invited to participate in a research interview. A further group of HE researchers were contacted from institutions with concentrations of HE research which had not submitted HE impact studies. The interview sample comprised 14 respondents, 5 of whom had written (or contributed to the writing of) HE impact studies, 7 were from institutions where there had not been an impact study relating to HE research. Ten interviewees had professorial designations; and, as this was a designation referred to by respondents, 6 were from pre-1992 and 8 from post 1992 institutions (see appendix 1).

The interview schedule was developed to elicit accounts of organisational deliberations relating to impact in the period leading up to the REF in 2014. Section 2 of the interview explored the reactions (personal and organisational) to the REF results. Section 3 sought participant's accounts of changing research practices (personal and organisational) which were associated with the REF impact indicator (see appendix 2).

Data analysis

Overview of impact

An indication of the number and thematic focus of HE case study submissions is provided in table 2 and more fully elaborated in appendix 3. Broadly these grouped into three themes:

• Access and progression: studies concerned with expanding and supporting a broader profile of students to access higher education provision and processes aiding retention and progression.

- Pedagogic: studies which expressed a primary aim of enhancing pedagogic practice within HEIs. Such studies had policy angle but largely as a form of embedding good practice.
- Policy: studies which presented an explicit account of responding to, or seeking to influence, a policy domain at national or sectoral level.

	Education UoA	Cognate disciplines
Access and progression	7	1
Pedagogic research	11	9
HE policy	2	13

Table 2: Thematic analysis of impact case studies

The pattern of submissions shows concentrations in pedagogic and access and progression themes in the Education Unit of Analysis. A greater number of substantive policy-oriented impact studies were submitted through cognate disciplines.

The corpus of 44 case studies gives insight to those cases selected by institutions as being good candidates for evidencing impact. Of interest in this study were the cases of institutions where HE researchers were located which opted not to submit HE focused case studies. Interview respondents from non HE submitting institutions (at professorial and reader/senior lecturer level) were able to give insight to the decision making factors which determined decisions.

Broadening definition of research excellence?

Analysis of the data sample identified that the majority of studies were collaborative with, on average, 3-4 research collaborators from the submitting institution. The extent of collaborations between UK universities (N=5) and international research collaborations (N=4) studies was fewer. Thirteen case studies were based on the contributions on a single academic. In 6 cases, the research and impact timescales reflect that research publication followed the impact activity, a formulation deemed acceptable in the REF criteria. In such cases, policy is represented at the 'end of the development cycle' as a form of embedding of good practice.

Given the specific purpose and financial return on these case studies, it is likely that the policy angle has been emphasised. However, certain indicators are of interest and relevance such as the extent to which the work has been commissioned or funded through alternative sources. As represented in figure 1, a similar proportion of case studies claimed to influence policy formulation and policy implementation. Of those studies which claim to have influenced central government policy, five were recipients of direct government funding in the form of contracted research or consultancy. A greater proportion were closer to Marginson's (1993) definition of self-controlled research in the sense that they were not funded or contracted by government agencies. Fifteen of the impact studies influencing national policies had been funded by sources other than central government (sources included charitable foundations, trade unions, sector organisations, research councils). Two impact studies were based on research with no external funder.

Ten case studies are defined in this analysis as 'emancipatory' in which the focus has been providing research resources for communities affected by particular policies to pursue change and transformation. In four cases, the broader question of what policy is for and facilitating functional spaces for policy dialogue are described in the impact study. Emancipatory themes include: detection of bias in plagiarism detection systems, equality policy in academic careers, addressing

levels of academic freedom in Danish HE system, resources for student to engage in curriculum enhancement.



Figure 1: Positioning of research in relation to impact

As shown on figure 2, claims of policy impact vary in sphere and scope. Twenty five case studies claim central governmental policy influence. Direct influence on government policy makers is exemplified by cases such as re-classifying labour market definitions of graduate employment, redressing funding policies which de-privilege part-time students and calculating the economic value of UK HE exports. However, a greater proportion (N=40) claim sectoral policy influence. In six cases, claim is for impact on policy only and six make claims which centre on practice impact. However, the majority of case studies claim policy and practice change.





The range of approaches to developing impact is presented in figure 3. This highlights the proportion of studies which represent sustained engagement with policy and/or practitioner communities and specifically developed vehicles to ensure research outcomes contribute to policy application or practice enhancement. Examples included: accredited training programmes, policy and practitioner networks, observatories and knowledge exchange fellowships. In other cases, a convergence is identified between a particular turn in policy debate and a field of ongoing research which results in a short period of impact activity.



Figure 3: approaches to impact

A significant proportion of case studies detailed the development of resources for new practices. Examples included: educational resources, practitioner guidelines, benchmarking tools, technological artefacts. Case studies exemplified engagement with collaborator agencies to make these resources available to relevant communities. Of those substantive policy-oriented studies, several identified multiple pathways to impact, serving practitioner communities as well as well as policy makers. Case study narratives highlight the levels of support provided by sector bodies and established policy and practice networks in providing pathways to impact. As such, the variety of case studies and impact approaches demonstrate, broadly, a relational orientation to policy and a concern to provide knowledge resources for new practices.

During interviews participants made observations which reflected varying perceptions of the 'field' of HE studies.

Working in higher education, and I guess I hadn't appreciated until you showed me this list how much HE research there is. I hadn't quite appreciated that, but I guess the thing that would be different, [name omitted] has a centre for higher education and it's not even here. (respondent 1)

My own experience was that what was tended to be submitted was impact case studies that followed the traditional form... sitting there as someone did research that had an enormous amount of impact, I wasn't even invited to write an impact case study, which I thought was interesting. (respondent 13)

At the time I thought, and I might be wrong because I was interested in all your case studies, I thought, 'No, they're not going to count that.' I thought I'd be, you know, not helping colleagues by concentrating on that. Yet, personally, there was a great deal of my own research, had I still been employed here, that could have made a good case study. (respondent 12)

I'm told, first of all, we didn't include studies on higher education for impact, if that's what you mean. (respondent 10)

These responses indicate differing organisational interpretations of impact in relation to HE-focussed research. The extent to which organisational interpretations of impact had been clarified, following the publication of REF 2014 outcomes is examined in the next section.

Constraints and obstacles to organisational learning

In a comparative evaluation of research assessment systems in the UK and Portugal, Deem (2015) observes the inevitability of unintended consequences of complex policies such as the REF and the need for collective learning in order to respond to past mistakes. On one level, the volume of information placed in the public domain provides a significant resource for learning. The format of public reporting of the evaluation of impact studies is through an impact profile on the REF website (REF 2015). However, limited information is provided on the evaluative judgements of particular case studies. The impact profile represents the percentage of impact case studies rated at each level (4* through to unclassified). As such, it is possible to determine the number of case studies submitted by a department in each category but not to determine which case study earned each rating. REF teams provide confidential feedback to the head of each HEI which comprises for each submission, concise feedback summarising the reason for the quality profiles awarded with reference to published assessment criteria. The feedback is produced by the sub-panels following the completion of the assessment. Communication with HEFCE confirmed that impact scores for case studies were not provided and the feedback did not necessarily relate to individual case studies, and may have focused only on general comments (HEFCE, 2016 personal communication). Among the sample of interviewees, only one indicated that the institutional feedback had helped to clarify which of the submitted case studies had scored more highly than others. In all other cases, this had been inferred through local deliberation.

This lack of transparency on the scoring of impact narratives by peer review panels limits the potential for organisational learning and creates the potential for a reification of a particular, narrowly defined, concept of impact which is inferred from institutions with consistent '4* profiles'. As identified in appendix 3, eleven HE impact case studies could be verified as 3 or 4* due to the institutional profile. However in a further 12 cases, there is the possibility that the HE impact case study may have been 3 or 4* but not a clear determination (denoted in italic font in appendix 3).

	4*	3*	2*	1*	U/C
Overall	30	36	26	7	1
Outputs	21.7	39.9	29.5	7.8	1.1
Impact	42.9	33.6	16.7	6	0.8
Environment	48.4	25	18.1	7.8	0.7

Average overall quality profile and average sub-profiles for all submissions in the UOA (FTE weighted)¹

 Table 3: REF 2014 Education Unit of Assessment Summary data (source:

 http://www.ref.ac.uk/media/ref/results/AverageProfile_25_Education.pdf)

Analysis of the contribution of impact scores to the overall REF scores is indicated in table 3: Respondents provided different comments on the nature of this relationship, largely implying a causal relationship with research output as determining impact score. This attribution was made by 3 respondents and is illustrated in the extract below:

I think what these three slides illustrate, amongst other things, is the interaction between assessments of impact and assessments of research quality in general. The ones that come out well are in what you might call the usual suspects, the ones that did better overall in the REF assessment. (respondent 2)

However, one respondent, from an institution which had earned a four star rating for impact, implied impact score compensated for research score:

The range of four star, three star outputs in publication terms and grant income were alright but weren't absolutely amazing, but although we did quite well overall in the league table for education, but the impact stuff was a huge thing. (respondent 1)

Given the limits to access of evaluative information from the assessor panels, a particular focus on interest in this study was on the inferences and understandings that have been emergent from the process at organisational and individual level. Respondents shared a range of observations on what had been learned or inferred from the process:

I can't really remember there was, except everybody was awfully pleased, because our case study had come out with top marks. So, it was just like, 'Well, we've got that right, then. We know the kind of thing that works,' as far as I remember. (respondent 14)

Impact aspect and the way it's illustrated merely gives a further turn of the wheel. Nobody really gains or benefits from the exercise because you don't have enough information to know what people thought of your submission to be able to learn from the grades that you get. That would be as true of the people who got high grades as it would be true of the people who got low grades. (respondent 8)

I think there was so much confidentiality and, let's face it, secrecy as to the whole REF process that, I think, people were largely unsure as to, well, you know, 'How are these adjudications being made?' I don't really think that we're that much clearer about it. (respondent 9)

In a case where consistently high ratings had been received, enjoyment of the positive evaluation appeared to be short lived in one organisation:

What happened with the outcomes of the last one was that we were able to use the impact case studies for at least a year to keep the faculty off our backs, because we were seen as, 'Well, they've done so well, look at these amazing impact case studies,' so that helped us, but now I would say two years on, we are probably, we haven't got any more advantage. (respondent 1)

Two respondents described ways in which the process enabled some form of personal or organisational learning:

I think, actually, in some respects having a mechanism that allows academics to do that in the context of saying, 'Well, this is what I am doing' is an important thing, in terms of feedback to the public of what is being done. At a second level, I think it is really important in the context of, I see more of a way of reflecting to practitioners actually thinking more thoughtfully about what our research is and having that, kind of continuous process of critical reflection that I think, personally, can enable better research. (respondent 9)

Well, I think one of the things I learned from the REF, or I think I learned, and to be honest, I've learned loads from buying, we paid an external reviewer to review all the work. That was more important than the scores were on the REF, you know. (respondent 5)

A level of cynicism was evident in half of the accounts of the respondents on aspects relating to the balance and priority placed on particular forms of research, and is reflected in the extracts below;

There's a sort of weariness about it now, which is I think is part of the-, I suppose it's inevitable really, but it's part of the current scene, I would say. This mapping out is just, I think, for me, shows that the whole REF industry has become a sort of little curriculum in itself. (respondent 1)

It's a priestly exercise that those involved know all about, but those outside struggle to understand and, in most cases, don't even want to understand what it's about. It's just a technology at the end of the day. (respondent 8)

Watermeyer and Hedgecoe's study emphasised the tendency of reviewers to rely on research outputs as a proxy measure for impact quality (2016). This tendency seems to be in evidence in some of the observations made by interviewees, which appears to be indicative of a normative judgement of impact against pre-existing institutional research reputations:

I think there were a few surprises that some institutions, and those certainly did some assessment, did a lot better than one might have anticipated. I think there was a correlation made therein to the impact scores, and impact as being something that might have distorted the overall sense of research excellence as it was existing from those institutions. (respondent 9)

I suppose the thing that does strike me, and this doesn't surprise me really, but I mean, I think if you look at the institutions where they got kind of three or four stars, then most of those, I think virtually all of them, are research intensive. Again, you'd expect that, because

they're more likely to understand the rules, and they're more likely to have high status researchers working for them. (respondent 11) Loughborough is not a Russell group but obviously I didn't know they had such a strong case study. (respondent 10)

Respondents identified differing trajectories in their personal response to impact as a new component of REF. As emphasised in the excerpts below, two respondents had become more positively disposed as an outcome of the process. In the latter two excerpts, respondents define describe a galvanising effect on their research practice, in response to a negative experience of organisational interpretation of the impact policy:

It certainly had a massive impact in terms of I started off very ambivalent about the impact agenda, because I am committed to the value of abstract research as a good, in and of itself, with knock-on goods that can't necessarily identify, but in the process of doing it, I actually became quite a fan. I thought it was something significant and important and it brought to light some of the research people were doing that was having really significant effect in people's lives [...] That kind of research hasn't necessarily been valued. (respondent 4)

You can surf the neo liberal policy wave, but you can kind of have fun while you're doing it. The way I'm surfing it is I'm using the impact agenda to show institutional policy, and say, 'Whoa, careful there, don't devalue this knowledge exchange or this practitioner research that's going on, the policy work that's going on, because that is really important for the REF.' (respondent 5)

The REF is part of a bigger agenda as we know. It has made me more critical, radical, more focused on the nature of the product, to look for points of antagonism. Now what I do is to say more clearly what I really think rather than not saying anything and hoping it will go away. (respondent 3)

And I think it's the same here, Universities are in competition with each other in the REF and 'woe betide you' if you help someone else, which again in not my way of working. I feel this time people may be stronger about sticking to their values. (respondent 13)

Such responses suggest a critical juncture in which responses to this new indicator can be amplified or mediated by organisational practices, as explored in the next section.

Impact on research practices

The policy parameters impose particular constraints and enablers with respect to HE focused research. The lack of detail in reporting of evaluative outcomes at granular level results in particular inferences being made at organisational level. The interviews enabled further exploration of changing research practices which were associated with this indicator, and gives some insight to the challenges presented by this split governance model.

At an individual level, interviewees varied in the extent to which they had responded to the indicator in terms of their own research practice. Respondents expressed positions ranging from: initial scepticism (respondents 4), conceptually opposed (respondents 3, 6) conceptually engaged (respondents 9, 11, 8); particularly aligned (respondents 12, 13) or unaligned due to research orientation (respondent 2, 10). Initial proponents of impact had been influenced negatively by institutional interpretations of the policy (respondents, 12, 13). These accounts, suggest that research orientation can mediate response to impact at a conceptual level. However, a strong

emphasis was placed on the organisational practices that were influencing and shaping responses and attitudes in terms of the forms of research identified as potentially impactful and associated resourcing strategies.

Respondent accounts reflected changes in organisational research practices which were associated with this formulation of impact. The picture of unevenness reported in other studies is reflected in these interviews. Negative organisational responses attributed to impact included: narrowing parameters regarding forms of research, over-managing and out-sourcing of aspects of impact activity and internal organisational rankings of 'impactful' departments.

My university wants impact supported by 3 or 4 star research – I think that's a mistake. (respondent 6)

So we've got this mad game playing now where you start to decide what is and what isn't impact in quite draconian ways... so they're already starting to be shaped up and crafted, and then anything else that's outside those case studies, whether it has impact or not, it doesn't really matter because they're not important...(respondent 1)

What I do notice is that a lot of institutions are getting very worked up about, you know, identifying what the impact case studies would be now, and telling people that they've been chosen and they've got to report to such and such a person in their research and enterprise division, and so on. So they're, kind of, slightly over-managing it, I think, because until we actually know what the rules are for next time-, of course you want to make sure people are thinking about this. (respondent 11)

Three respondents indicated a paradoxical reduction in institutional collaboration (respondents 5, 9 and 7). In more positive accounts, respondents identified ways in which the policy had conferred value on broader forms of research (respondent 4) and where impact-related funding had been used to support the wider Faculty community to extend the reach of research (respondent 5).

Such organisational responses create associated management challenges in terms of how to support those academics not selected for impact studies. Several of the interviewees, having reached senior academic positions, reflected on the advice they were inclined to pass on to early career researchers; effectively to advise against pursuing particular forms of research. These accounts emphasise the challenges at organisational level in responding to this indicator constructively and in defining policy responses which foster inclusion rather than exclusion.

DISCUSSION

Impact brings a new element to research evaluation which gives conceptual and functional space for interpretation. Documentary analysis of the forms of research being used to demonstrate impact in and on HE demonstrates a greater diversity in the forms of research and spheres of impact represented than anticipated by earlier research studies in terms of the ways in which research relates to policy and the extent of impact studies which relate to pedagogic practice. Analysis demonstrates a limited uptake of some the opportunities to define impact present in the policy formulation, such as collaborative impact studies and cases in which research is the culmination of impact work. The extent to which this breadth and diversity is maintained in future assessments is unclear as accounts demonstrate organisational responses which emphasise particular forms of research.

Research orientation was identified to be a mediating factor shaping responses to impact among social scientists, in an earlier study (Oancea 2013). This was reflected by respondents , some of who

claimed to have been initial proponents due to an action and practitioner research orientations and others who expressed a negative or neutral orientation due to research approach. However, the analysis demonstrates the way responses to impact are mediated to a significant extent by organisational policy responses. Initial proponents of the focus on impact in some cases had become disaffected by the potential of this indicator to mobilise research. In other cases, initial scepticism had been replaced with perception of opportunity.

The opportunities to learn from and redefine impact have been limited at sectoral and organisational level due to lack of detail on the evaluative outcomes of impact studies. This possibility is further limited by implicit conceptions of impact reflected in several respondent accounts which reflect normative judgements, based on prevailing hierarchies of research reputation. The remunerative implications associated with impact emphasise competition between institutions, disincentivising collaboration or at least creating complex matters in making claims of impact.

The level of disaffection among the majority of interviewees is of particular concern given their seniority in career stage. Concerns were expressed on the impact on research culture and practice and the effects on early career academics, limiting the space to grow and develop. As pointed out by one interviewee, the impact agenda doesn't oblige everyone to participate (given the specified number of case studies) but can open up a new avenues in research.

Mills (2009) characterises two differing strategic responses to interventionist policies directed at HE: an arms-length instrumentalised response and a form of policy activism in which policy is reframed and re-interpreted locally in ways which may resonate more closely with interest in the discipline. The former strategy was more evident in respondent accounts. However, there were expressions of an orientation to the latter approach in in cases where the policy had been used as a means of refocussing research centres and postgraduate programmes to align with impact themes (respondent 2) and to use the REF impact indicator to legitimate a broader span of research in the organisation (respondent 5). Interestingly, greater space for re-framing was expressed by respondents from post-92 institutions in general. However, a critical orientation to the policy effects of REF impact underpinned many of the respondent accounts which implies a perception of limited space to mediate and translate policy.

Oancea emphasises the important but easy to miss opportunity to 'to debate and reconceptualise impact and its relevance to accountability processes and to recalibrate assessment methodologies' (2013: 242). As shown in the analysis, a relational orientation to policy was evident in a number of the impact case studies, in the way that impact oriented activities addressed policy and practitioner communities and on the creation of resources to support new practices. This orientation was less evident in the organisational and individual responses to this form of research governance. This study emphasises the value of adopting a relational orientation to REF impact policy in local organisational contexts.

In a context of debate about fostering greater inclusivity in research (Willetts, 2014), respondents portrayed differing experiences. A formulaic response to impact was described in some institutional contexts which reified particular forms of research and narrows the parameters by which impact is interpreted. In other cases, respondents described a re-framing and contextualising of impact in ways which resonate with research orientations and practices within departmental contexts. These accounts demonstrate the scope for local strategies to amplify exclusionary practices which foreground particular forms of research and types of researcher and other approaches which interpret impact in ways which emphasise inclusivity.

Watermeyer acknowledges structural and organisational 'inconsistencies' in policy formulation but points to the potential for impact to 'be re-imagined and practised not as the resting ground of research but the seed-corn inspiring new perceptual horizons; knowledge experiences and relationships; potential research avenues' (2014). Interview respondents highlighted examples of narrowing of parameters of impact at organisational level. Furthermore, some interviewees demonstrated a prevailing norms of research excellence in their responses to the indicator which may further constrain the potential of the impact indicator to broaden conceptualisations of research excellence. However, within the accounts which highlighted the potential to interpret the policy formulation in ways which can counteract prevailing norms and emphasise inclusive practices.

With current speculation that the proportion of evaluation and remuneration attached to this new research indicator will be increased, there is a need for greater clarity and consensus on what counts as impact in different disciplines. Documentary analysis of approaches to achieving impact in the case studies highlighted the role of professional bodies and apex organisations in enabling reach and providing networks and resources to facilitate impact. These agencies also have a role in mitigating the competitive forces made evident in respondent accounts. Such organisations have a valuable role in furthering the debate about impact and broadening the normative base of conceptualisations of impact in relation to educational research relating to the tertiary education sector.

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Appendix 1: Profile of interviewees

1. Professor of Education, female, Pre-1992 university (Russell Group)

2. Professor of Education, Male, Pre-1992 institution. Member of REF panel for Education Unit of Analysis.

3. Dean for Teaching and Learning, post 1992 institution. Male. Impact case study author.

4. Academic impact co-ordinator. Lecturer/Educational researcher. Female. Pre-1992 institution (at time of REF2014).

5. Professor of Education, post 1992 institution. Male Impact case study author.

6. Reader, Faculty of Education. Post 1992 institution. Female. Impact case study author.

7. Professor of Education. Post 1992 institution. Male. Impact case study author.

8. Professor of Education/former Vice Chancellor. Pre-1992 institution. Male. Impact case study author.

9. Professor of Social Science. Director of research. Pre-1992 institution. Male. Russell Group.

10. Senior Lecturer in Education. Pre 1992 institution. Female.

11. Professor of Education/Dean of Teaching and Learning. Female. Pre 1992 University.

12. Emeritus Professor of Education. Post 1992 university. Female.

13. Professor of Education. Female. Post 1992 university.

14. Professor of Education. Pre-1992 University. Female. Russell Group.

Appendix 2: Interview schedule

Section 1: involvement/experience of REF2014

Could you give a brief account of your role in preparation for REF2014 in terms of the impact aspect.

Discussion prompt: Refer to REF definition of impact.

Was there any discussion/interpretation around this? Could you give some illustrations of the ways people understood impact and responded to it? In what ways was impact understood in your department? Where there particular considerations in the interpretation? How did you see your own research in relation to impact?

Section 2: Responses to REF results

Discussion prompt: share thematic analysis of impact case studies.

What was your understanding of impact following the REF results? What inferences/interpretations did you make on the basis of the REF impact results and the way they were reported?

Section 3: Effect on research practices

Discussion prompt: Examples of types of impact metrics tracking how research has been used. Wilsdon et al (2015)

Do you perceive any changes that have been made since REF2014 which are reflective of an increased focus on impact?

How do you see your own research in relation to REF impact requirements?

Appendix 3: HE Impact Studies: Thematic analysis

	Education UoA	Cognate disciplines
Access and progression	7	1
Pedagogic research	11	9
HE policy	2	13

Cognate disciplines: Philosophy, Psychology, History, Politics, Sociology, Social Policy, Business and Management.

HE Access and Progression

Education UoA N=7	Non Education UoA (Cognate disciplines)
1.Fee modelling to ensure access (UCL)	N = 1
2.Putting HE in reach for young people in care	22. Widening participation in Latin American
(UCL)	Universities (Hull)
3.Delivery of HE through FE colleges	
(Sheffield)	
4.Community engagement/open licensing of	
content (OU)	
5.Student retention (Edge Hill)	
6.Widening participation policy (UWE)	
7.Improving access for marginalised groups	
(Bedfordshire)	
8.Access for refugees and asylum seekers	
(Leeds Met)	

Pedagogic Research

Education UoA N =11	Non Education UoA (Cognate disciplines) N=9
9. Application of threshold concepts (HE &	23. Detecting bias in automated plagiarism
schools) Durham	detection systems. (Lancaster)
10. Solving the 'maths problem' in HE	24. Embedding employability skills in
(Loughborough)	Accounting education (Dundee)
11. Enhancing learning, teaching and	25. Shaping policy for sustainable business
assessment in HE (Edinburgh)	education (Nottingham)
12. Personal Development Planning	26. Work based learning (Chester)
(Worcester)	27. Entrepreneurial education (Durham)
13. Digital literacy (Glasgow Caledonian)	28. Shaping social work education (Sussex)
14. Interoperability of student data (Bolton)	29. Analytics methods in Philosophy of Art
15. Approaches to assessment (Cumbria)	(York)
academic induction (Cumbria)	30. Research based teaching (UCL)
16. Lecturer self-efficacy instrument	31. Dialogic education (St Mary's Twickenham)
(Bishop Grosseteste)	
17. Semantic web (LJM)	
18. Student as producer (Lincoln)	
10. Improving practitioner research (York St	
John)	

HE Policy

Education UoA N=2	Non Education UoA (Cognate disciplines) N=13
20. Shaping research assessment policy	32. Reinterpreting university rankings
(Oxford)	(Oxford)
21. Evaluative research improves educational	33. Strengthening HE finance in UK/EU (LSE)
policy and practice (Lancaster)	34. Value of Global UK education exports
	(Lancaster)
	35. Equality policy and practice in academic
	research careers (Oxford Brookes)
	36. Linking academic research, practitioner
	performance and policy formation in Finance
	(Exeter)
	37. Benchmarking regional contribution of
	universities (Newcastle)
	38. Classification scheme for graduate
	occupations (UWE)
	39. Discourse and communication in public life
	– HE context (Abertay)
	40. Student funding for part-time students
	(Birkbeck)
	41. Public policy, innovation and learning
	transfer (Aberdeen)
	42. Youth, citizenship and politics: the social
	role of higher education – Royal Holloway
	43. HE Quality assurance and it regulatory
	framework (LHU)
	44. Fighting implicit bias in academic careers
	(Sheffield)

Case studies represented in bold font are verifiably 4^* on the basis that the whole submission was classified at this rating. Case studies denoted in italic were part of a submission which had a percentage rated at 4^* , 3^* and 2^* .