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To cite this article: Katy Jordan (2022): Academics' perceptions of research impact and engagement through interactions on social media platforms, Learning, Media and Technology, DOI: [10.1080/17439884.2022.2065298](https://doi.org/10.1080/17439884.2022.2065298)

To link to this article: <https://doi.org/10.1080/17439884.2022.2065298>



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Published online: 18 May 2022.



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# Academics' perceptions of research impact and engagement through interactions on social media platforms

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## ABSTRACT

The pursuit of greater research 'impact' has become embedded within Higher Education, through links to perceived value for money, and reified through institutional auditing processes. Academics are frequently encouraged to use social media to facilitate public engagement and enhance research impact, as it offers the potential to connect with more diverse, non-academic audiences. However, little is known about the relationship between the use of social media and academics' own perceptions of research impact and public engagement in practice. In this paper, an analysis of text responses from a survey of academics ( $n = 107$ ) is presented. This includes what academics perceive to be examples of high-impact interactions through social media, and how this is mediated by different platforms. The findings have practical implications for social media training for academics and also suggest that institutional definitions of research impact may not account for the range of scholarly engagement social media platforms can facilitate.

## ARTICLE HISTORY

Received 17 July 2021  
Accepted 6 April 2022

## KEYWORDS

Social media; higher education; research impact; public engagement; digital scholarship

## Introduction

The use of social media is increasingly expected to be part of the labour of academics for a range of purposes, from building personal learning networks to enhancing the impact and public engagement with their research. The focus of this study is upon the latter; that is, the relationship between social media and public engagement or research impact. Academics are increasingly encouraged to promote their work through social media as part of the so-called 'impact agenda' (Jordan and Carrigan 2018). Increasing the impact of research is often cited as a reason for academics to engage with social media, either through increasing the spread and readership of formal academic publications (Thelwall 2017), or as a mechanism to improve impact through enhanced public engagement (LSE Impact blog 2015).

An example of how research impact has become a prominent issue for academics is the 'Research Excellence Framework' (REF). This national audit of research outputs is a highly influential, critical issue for the UK Higher Education sector. One of the key distinctions between the REF and its predecessor, the Research Assessment Exercise (RAE), was the foregrounding of the perceived 'real world' impact of research, framed as a reflection of better 'value' for research funding (Jump 2013). Academics do perceive the inclusion of research impact within such audits to be valuable in presenting a richer account of scholarly activity (Watermeyer 2012). However, the definition of what constitutes impact is not always clear, can vary according to different institutions, and

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how to clearly demonstrate it can be challenging. For example, UK Research and Innovation (2021) defines research impact as:

an effect on, change or benefit to the economy, society, culture, public policy or services, health, the environment or quality of life, beyond academia. (UKRI 2021)

The Research Councils within the UK distinguish between academic impacts, and economic and social impacts (Vitae 2021). However, these definitions belie a complex range of ways in which research impact can play out in practice. Reed (2020) presents a comprehensive typology of types of research impact, drawing upon case studies from a range of contexts, and identifies 10 distinct forms of impact: attitudinal; economic; environmental; health and wellbeing; policy; other forms of decision-making and behaviour change impacts; cultural; other social impacts; and capacity or preparedness. The criteria for assessing impact in the REF introduce two practical dimensions of thinking about the scale of impact – the significance of the change, and reach (Fast Track Impact 2021). It is also important to distinguish between ‘research impact’ and ‘public engagement’; for example, in guidance produced in relation to the REF, the distinction is presented as follows:

Public engagement (in the context of the REF) describes an approach to involving the public in meaningful roles in the development, uptake and/or application of research. The act of engaging the public with research does not count as impact. Impact is what happens when people interact with the research, take it up, react or respond to it. Public engagement doesn’t just happen when the research is complete. It can (and often does) take place before and during the research – for instance, helping to shape its focus and direction and its relevance to potential users. (REF 2021, 1)

As such, public engagement is distinct, but related – and can be a mechanism toward achieving the goal of research impact. However, demonstrating and documenting impact is a challenging task, and being able to effectively provide evidence to support claims is key but may be elusive (Penfield et al. 2014). There is a potential tension between the use of metrics to reflect the impact on one hand, which risks presenting an over-simplification, to full narrative accounts which require significant time and resources to construct (Hughes 2016). To demonstrate the significance and reach, both quantitative and qualitative evidence is required. For example, in an account reflecting on a particular REF impact case study, Copley (2018) notes that figures are generally required for evidence of reach, while significance can be demonstrated if the intended beneficiaries change their behaviours in light of the research activities. Copley (2018) also notes that interactions with the media do not constitute ‘impact’ in themselves, as it is not a direct dialogue with stakeholders.

Analysis of the 2014 REF impact case studies showed that impact can take a range of forms and engagement with different sectors – ‘from commercial applications to public and cultural engagement activities’ – and as such, research impact may have a different character according to academic disciplines (Terämä et al. 2016). This variation suggests that a broad definition of evidence, to support claims and demonstrate impact, is required. Recent analysis showed that approximately a quarter of case studies included references to forms of social media; furthermore, the ready availability of metrics and statistics, and their inclusion in case studies as a form of evidence of impact, is symptomatic of the broader hyper-competitive, increasingly neoliberalised higher education sector (Carrigan and Jordan 2021). This highlights the need for further research into how the impact agenda operates in practice. While the formalisation of the issue of research impact through the REF is particular to the Higher Education sector in the UK, striving for greater research impact is a concern for academics across the globe, whether formally or informally. There are also research audits and interest in demonstrating research impact in other countries (Sivertson 2017); for example, Australia has moved toward a similar model to the REF through the introduction of the engagement and impact assessment, in addition to its main RAE (Havergal 2019; Hughes 2016).

Alongside an increase in the desirability of being able to demonstrate ‘research impact’ and a wider range of forms of public engagement, attention has also turned to social media as a means to promote this. While social media is often seen as a way to enhance the impact and public engagement with research though being able to connect with potential new, non-academic audiences, the

term social media is broad and encompasses a wide range of platforms and the ways in which they are used and conceptualised varies. Academic identity online consists of multiple ‘acceptable identity fragments’ (Kimmons and Veletsianos 2014), from personal to professional, which are further refracted across the range of platforms which an individual chooses to use (or not) (Jordan 2020; Tusting et al. 2019; Veletsianos and Shaw 2018). The pressure of the impact agenda and its integration into higher education within the UK can have significant implications for the public expression of academic self (Watermeyer and Tomlinson 2021; Wróblewska 2021).

Expression of academic identity through different platforms is highly nuanced and aligns with a spectrum from personal to professional (Jordan 2020). The nature of the ‘networked publics’ (boyd 2011) that result from the merging of identity and audiences through different forms of social media will have implications for the ways in which engagement and impact can be enacted through different platforms. The platformised nature of social media raises questions of how academics’ experiences differ according to particular sites; this is often neglected when discussing ‘social media’, and taking a look in detail at how experiences vary according to different platforms is a key focus for this study. Does the nature of engagement and perceived impact differ according to sites? How do academics’ own experiences of using social media platforms – and their perceptions of impact – compare with institutional definitions?

The goal of this project was therefore to address this gap and explore the different and nuanced forms of what academics believe to be high-impact interactions through social media, through their experiences of using social media platforms. The following research questions guided the study:

1. What do academics perceive to be indicative of the significant impact of their research through the networked publics of social media platforms?
2. How does this vary according to different social media platforms?

## Methods

The study was exploratory in nature, as no previous studies have addressed academics’ perceptions of research impact through social media. While some formal, institutional definitions of research impact exist (for example, the UK Research and Innovation definitions of impact; UKRI 2018), the focus here was upon academics’ own perceptions, so it would have been inappropriate to apply an a priori framework. With this in mind, a qualitative approach to data collection and analysis was used, eliciting free-text responses and applying an inductive, grounded theory-based approach to data analysis.

Data collection was carried out via an online survey, which included both quantitative and qualitative elements. The quantitative part included an inventory of statements about the purposes of using different platforms and information sharing, and perceived audiences at different platforms (Jordan 2020). This paper focuses upon the qualitative component of the survey.

### Survey design

This study focuses on the final section of a larger online survey. In this section, participants were presented with free-text responses and invited to submit up to three examples of interactions they had experienced on social media which they perceived to be indicative of high impact. The presentation and phrasing of the question are shown in Figure 1. ‘Impact’ was specifically not defined, so as to not constrain the responses and elicit participants’ own definitions and perceptions of its meaning. This was an intentional part of the survey design, to elicit the participants’ own definitions of impact in this context. In responding to the question and describing their example (s) of perceived high-impact interactions through social media, participants were requested to

**Page 7: Part 4 - Interactions and impact through social media**

This section focuses upon research impact and interactions which have taken place through your use of social media. For this question, describe any activities or interactions which have taken place through social media that you personally consider to be examples of valuable research impact.

Please provide up to three examples, one per text box below. Examples can be brief but please try to include the social media platform involved, a short summary of the interaction, who it was with, any outcomes which resulted, and why you consider it to have been particularly useful.

Example 1 *Optional*

**Figure 1.** Screen capture of how the free-text question was presented to participants.

provide specific information about the particular platform involved, who it was with, any outcomes, and why it was considered to be particularly useful.

The survey was developed through the JISC Online Surveys website. Prior to launch, the survey was pilot tested and received approval through the Open University Human Research Ethics Committee (reference number HREC/2701/Jordan). Participants were provided with detailed information about the project, its purpose, and how the collected data would be stored and used, on the landing page of the online survey. It was made clear that by clicking to proceed to the survey, participants indicated their agreement with the terms and consent to be included in the study.

### **Sampling**

The survey was carried out using the JISC Online Surveys website during April and May 2018. During this time, it was completed by 198 participants in total. Completion of the free-text section was optional; 107 participants submitted at least one example, with 238 examples being submitted in total. The survey was promoted through social media, and information posted through the researchers' profiles at Academia.edu, a personal blog, Facebook, Instagram, LinkedIn, ResearchGate, and Twitter, and sharing was encouraged. To help promote the survey across a wider range of disciplines, several academic societies and highly followed academic interest Twitter accounts were approached by direct message to request for the information to be retweeted. Responses to an item in the survey which asked participants to indicate how they had found out about the study showed that the majority found out through Twitter (72), followed by Facebook (19). Focusing on the 107 participants who submitted text responses, an overview of the demographic characteristics of the sample is shown in Table 1. A range of different ages, job positions and academic disciplines were represented, to a greater extent from the Social Sciences and mid-career academics. Participants were drawn from a range of locations – 15 different countries were included – although half (54) were from the United Kingdom.

### **Data analysis**

The examples were imported into nVivo for qualitative analysis. Twenty-nine examples were subsequently excluded from further analysis due to insufficient information, missing reference to social

**Table 1.** Summary of demographic characteristics of the survey participants.

	<i>n</i>	%
Discipline		
Arts & Humanities	24	22.4
Biological & Biomedical Sciences	12	11.2
Engineering & Physical Sciences	8	7.5
Social Sciences	63	58.9
Total	107	100
Job position		
Graduate student	19	17.8
Researcher	12	11.2
Lecturer	34	31.8
Professor	20	18.7
Academic support	15	14.0
Other	7	6.5
Total	107	100
Age		
20–29	12	11.2
30–39	26	24.3
40–49	27	25.2
50–59	19	17.8
>60	6	5.6
Missing	17	15.9
Total	107	100

media platforms, or being statements about non-use. A total of 209 examples were included in the analysis.

Each example was coded for three types of information: the platform involved; the perceived audience (if given); and the nature of the interaction considered to be high-impact. While platform and audience were straightforward to code, a wide variety of types of high-impact interactions were reported. On the third point – the type of interaction being reported – a grounded theory approach was used to characterise the nature of the examples given (Glaser and Strauss 1967). Open coding was initially used, while also undertaking constant comparison in the process; a sense of approaching theoretical saturation was gained after coding the first 100 items (Morse 2011). The analysis resulted in six themes being identified in relation to the types of interaction reported. Axial coding was then used to identify broader themes and relationships within the data. An overview of the coding is provided in the coding table shown in Table 2.

The accuracy of the analysis was verified by the application of the coding scheme by a second coder. A sub-sample of 50 random examples were coded and Cohen's Kappa (Cohen 1960) was calculated as a measure of inter-coder reliability. This gave a value of 0.917, which indicates a high level of agreement (Landis and Koch 1977).

## Results and discussion

The results will be presented and discussed here in two sections. First, the themes which emerged in relation to the types of interactions which academics perceive to be exemplary of research impact

**Table 2.** Coding table.

Over-arching group	Theme	Example
Outward information flow	Amplified dissemination	Sharing a formal published output – e.g., a journal paper
	Knowledge transfer	Discussing a topic with other academics in that field
	Proof of impact	Intending to use interactions – e.g., metrics, quotes – as evidence
Inward information flow	Developing self	Use of the platform as a personal learning network
	New opportunities	Finding out about opportunities such as job vacancies or collaboration opportunities
	Novel engagement	Reaching new communities or participants to take part in research activities

through social media will be presented. Second, differences which emerged according to particular platforms are discussed.

### **Perceptions of ‘high impact’ interactions through social media**

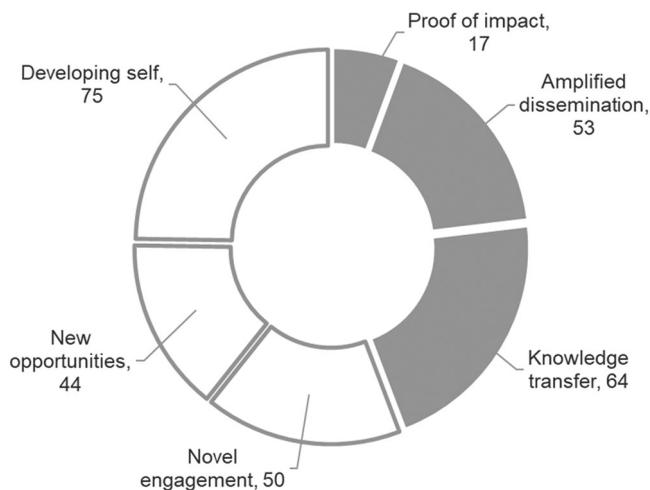
The emergent coding scheme comprised six themes. The themes are distinguished from each other by a combination of different purposes of interaction involved and the beneficiaries in each case. **Figure 2** provides an overview of the six themes, summarising each theme and the number of examples which contributed to each theme, within the 209 analysed. Note that a single example may have included multiple codes.

The six themes can be divided into two broad groups, according to the overall flow of information – whether outward from the individual into communities, covering forms of dissemination, or inward in instances where the individual benefits from information sourced from the community. The frequency of coding is approximately equally divided between the two groups, and each comprises three themes. The themes will now each be discussed and illustrated using quotes, for each of the two over-arching groups in turn. Note that the quotes are reproduced verbatim as submitted by survey participants.

#### **Outward information flow – forms of dissemination from the academic to community**

The following three themes sit within the broader category of outward information flow: amplified dissemination; knowledge transfer; and proof of impact.

Amplified dissemination (53 instances) refers to enhanced dissemination of traditional academic publications. This theme has traditional scholarly outputs – such as journal articles, book chapters, conference papers and academic seminars, for example – at its core, and the focus is upon how these traditional dissemination models can potentially reach a larger audience through social media. The perceived audience here is still primarily academic beneficiaries, but a wider reach than through the documents’ original publication outlets alone, although there is also the potential to reach other, unknown audiences. Furthermore, through social media, academics can find out about a wider range of ways in which their formal publications are being used in practice.



**Figure 2.** The six themes which emerged from coding the 209 examples. Themes are colour-coded according to the two over-arching groups of categories: outward impact (grey) or inward impact (white). Numbers denote the number of examples which contributed to each theme.

Sharing my published paper across facebook, twitter, researchgate and academia.edu I think has given it a much wider audience than it otherwise would have had, I have had several requests/ reports to read it and positive feedback – the paper has had a better impact than just being in the journal would have given it.’

Twitter – posted about an upcoming book and a related seminar. It was retweeted several times and allow us to get a good coverage of the book and sign-ups to the seminar

I published a chapter containing a visualization of a concept. This visualization makes its way into other people’s slides for lectures and conference talks, which I sometimes hear about via Twitter. To me this illustrates impact because the visualization is getting people talking, changing their conversations, and hopefully this will lead to changes in practice.’

Knowledge transfer (64 instances) refers to less formal forms of exchanging ideas and resources, but still between primarily academic participants. This was the most frequent category within the overarching group of ‘outward information flow’ and encompassed a variety of purposes of interactions. For example, keeping up-to-date with their research area, discussing their topic, sharing teaching materials and requests to access papers.

‘Twitter – lots of interactions with respected authors in field of interest – retweets, replies and some DM resulting in joint conference papers. Real results in terms of following key authors in certain areas and getting their thoughts, most recent work etc. etc.’

I share research about evidence-based teaching practice. I do this on Twitter and Facebook. Often interesting discussions and the sharing of different experiences arise in the comments section. The sharing of the post is usually quite good for my reach and network size.

On systems thinking while working for an large public sector organisation – tweeted out looking for a text that had been recommended but was out of print. Author was in touch and sent me free copy – [name redacted]

Note that this theme also has particular links to a theme which will be discussed in relation to ‘inward information flow’, around professional development (‘developing self’).

The final theme within this group, proof of impact, is the least frequent code (at 17 instances) covering a small but distinct type of examples, where social media is explicitly identified as a source of metrics and data relating to quantifying the reach of academic outputs. In some instances, this ‘evidence’ was highlighted as being useful in order to illustrate impact to institutions or funding bodies.

Journal tweeted when my article was published – many members of the journal community retweeted the tweet so my Altmetric score got off to a quick start.’

The blog on female prisoners had a huge number of hits during commemorative periods in Ireland. The website address was easily locatable for those looking for a major heritage site – Kilmainham Gaol – and so I got a lot of traffic from them. It was feed back to the funding body re the scale of interactions and where they came from.’

We use Twitter comments by individuals and organizations who have participated in our partnership projects to qualitatively evidence impact through individual testimonials.

### ***Inward information flow – opportunities for the academic, from the community***

Conversely, in the second grouping of themes, the academic is the beneficiary of the interactions to a greater extent. The three themes included in this group are novel engagement; new opportunities; and developing self.

The most frequent theme within this group is developing self, with 75 instances. This category includes a range of ways in which the individual academic and their career development is the main beneficiary. This can include activities such as network building, getting support from the community, and career opportunities. This theme was also associated with affective interactions with peers – such as showing appreciation, celebrating milestones and commiserating bad news. Some

examples suggested that this deeper form of interaction can follow-on from an initial sharing of articles as a starting point (see the previous discussion of ‘amplified dissemination’).

I’ve built up quite an extensive UK and international personal learning network – this mainly on twitter – when I’m stuck – I just ask – makes sure learners and academic staff wherever I am working get best global advice

Researchgate – asking authors for access to their articles. After thanking them for the paper access, a small conversation relating to the article topic commences

I love using twitter to learn more about academic writing, publication and dissemination. I have some favorite people to follow because their productivity inspires me and their advice clues me in on how to do more.

The second theme is closely related to ‘developing self’ but warranted a separate theme as the category was relatively large (44 instances) and relates to a specific type of professional development activity. New opportunities include examples in which academics were able to find out about academic opportunities – such as speaking, writing and funding – through social media. Frequently, this involved a connection established via Twitter turning into invitation to a speaking event.

Ran a research project and published details on WordPress blog, which was picked up by a UK HE training organisation, who asked me and a student co-researcher to present as part of a training event for other HE institutions. I guess more of an example of impact within HE sector but then the research project was aimed at enhancing student partnership in teaching and learning.

Facebook. Journal was recruiting for student editors. I ended up joining – in two years, I was leading the journal, and was a co-author on a published study. Would have never had this experience or found out about student-run journals if it weren’t for Facebook.

I have been invited on the basis of Twitter posts to give academic lectures, and chair panel sessions, in my areas of expertise.

The final theme, novel engagement (50 instances) could be considered the most valuable in terms of impact definitions which place emphasis on novel, meaningful engagement with the public. This theme has been included within the ‘inward information flow’ grouping overall, as the academics still typically benefit overall – for example, by gaining research data or participants, or being able to demonstrate novel impacts. Furthermore, this theme would not sit well in the ‘outward information flow’ category as the public tends to be more actively engaged in these activities – as participants, or integrating into practice – rather than being simply passive recipients of the information. As such, this theme reflects what Ozanne et al. (2017) term the ‘relational engagement’ approach – integrating stakeholders’ perspectives within the research process itself. This theme includes a wide range of examples, from using social media as a research data source, crowdsourcing data, engagement with non-academics, and scholar-activism.

Individual members of the public have contacted me with new information – eg offers of historic photos, family memories etc – after seeing posts in twitter

Finding research participants through Twitter. Recently needed academic participants for my PhD research and posted about it on Twitter. I got multiple responses – two from people who didn’t fit the criteria – and then three who did. Two of these participants I had not had prior interaction with, and the third participant was someone with whom I was already friends in ‘real life’. This helped me get participants from other places/institutions/outside my immediate social circle, which has been incredibly useful for my research.

A senior civil servant at the Cabinet Office saw a Tweet I posted about policy impact at my university. He happened to be undertaking a study at that time about interactions between government departments and university research, and so got in touch with me because of my Tweet and we ended up arranging a visit from him to my university to meet academics who have policy impact.

### Themes associated with different social media platforms

Having introduced and discussed examples from the six themes identified across the examples of perceived ‘high impact’ interactions through social media, in this section, the focus turns to whether different forms of perceived impact and engagement are associated with different social media platforms.

A range of different platforms were referred to in the examples given by participants. The sample comprised 16 different platforms; the platforms cited in the examples, and frequency, are shown in [Table 3](#). It is notable that a relatively wide range of platforms were mentioned, in addition to the major social networking sites such as *Facebook* or *Twitter* for example, and the majority were mentioned at a very low frequency. *Twitter* dominates the examples by far, being mentioned in approximately three-quarters of the sample. Furthermore, the distribution of particular platforms given in the examples contrasts with the frequency of platforms mentioned in the REF impact case studies, where the top five most frequently used platforms in descending order were blogs, *Google Scholar*, *YouTube*, *Twitter* and *Facebook* (Carrigan and Jordan 2021).

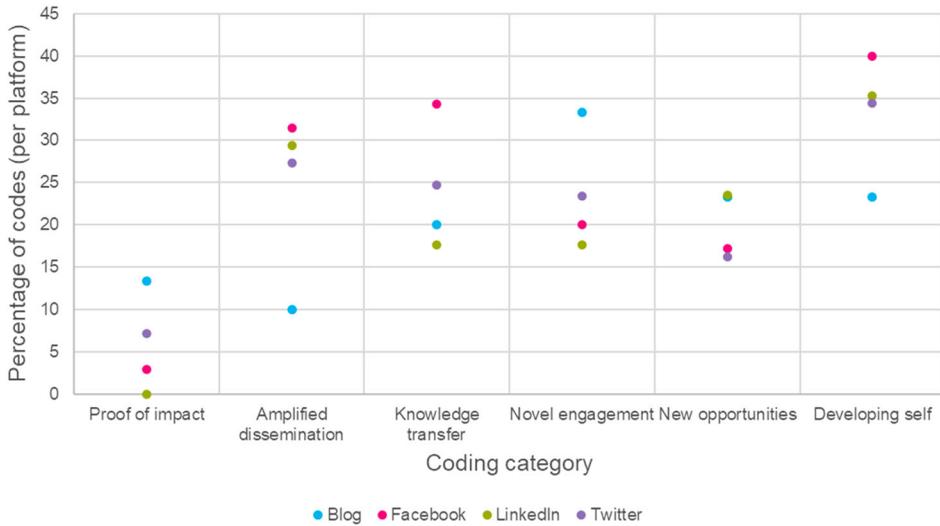
The steeply unequal distribution of frequencies according to platform, and small sub-sample size associated with most of the platforms, reduced the feasibility of drawing comparisons across different platforms. In order to explore whether different themes were associated with particular platforms, the analysis focused on the top four most frequently mentioned platforms ( $17 < n < 154$ ; blogs, *Facebook*, *LinkedIn*, and *Twitter*). As the sub-sample sizes varied, the frequency of each thematic code associated with each platform was converted to a percentage per platform, illustrated in [Figure 3](#).

While it is important to caution that the sample sizes vary here, and that the emergent categories are subjective to an extent, the platforms do not all demonstrate the same profile across the six thematic areas. The same information shown in [Figure 3](#) is also presented as a radar chart in [Figure 4](#) (note that both figures have been included as while the values are displayed more clearly in [Figure 3](#), it is easier to discern the overall trends per platform in [Figure 4](#)).

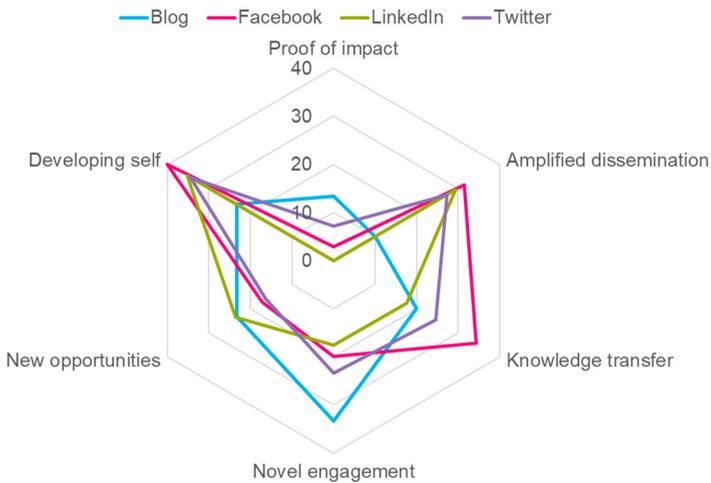
[Figure 4](#) demonstrates some key areas of convergence and divergence in the overall footprint per platform. The footprint for blogs is notably different to the other platforms, being much more frequently associated with ‘novel engagement’ and ‘proof of impact’, but less so in terms of the other themes. *Facebook* is prominent in terms of ‘developing self’, ‘amplified dissemination’ and ‘knowledge transfer’, which is surprising given that academics typically consider this to be a predominantly ‘personal’ rather than ‘professional’ platform (Jordan 2020). A less surprising finding is that *LinkedIn* is a platform most associated with ‘new opportunities’ – but more surprising that

**Table 3.** Range and frequency of social media platforms mentioned in the free-text responses included in the qualitative analysis, shown in descending order of frequency.

Platform	Number of examples	Percentage of total (209)
Twitter	154	73.7
Facebook	35	16.7
Blog	30	14.4
LinkedIn	17	8.1
ResearchGate	8	3.8
Academia.edu	4	1.9
Instagram	3	1.4
Google+	2	1.0
Google Docs	1	0.5
Google Hangouts	1	0.5
Mailing lists	1	0.5
Mastodon	1	0.5
Medium	1	0.5
Periscope	1	0.5
Slack	1	0.5
Slideshare	1	0.5



**Figure 3.** Frequency of use of different coding categories according to four main forms of social media. Note that the frequency is expressed as a percentage of the total number of examples per platform, as the number of examples given varies (see Table 3).



**Figure 4.** Radar chart depicting the data shown in Figure 3, in order to illustrate the overall characteristics of each platform type.

it is on a par with blogs in this respect. It is also notable that – with the exception of LinkedIn and the ‘proof of impact’ theme – the majority of platforms are associated with all of the themes, to at least some extent, which underscores the diversity of nuanced ways in which academics integrate different components of the social media ecosystem into their professional practices.

## Conclusions

This paper has explored academics’ own perceptions of what constitutes research impact through social media. The first research question guiding the study asked what academics perceive to be indicative of the significant impact of their research through the networked publics of social media platforms. The phrasing of the question within the survey purposefully avoided giving a

pre-defined definition of ‘research impact’, in order to avoid influencing the responses and gain academics’ own perceptions of this.

The range of interaction types identified by participants does include activities which would fall within the institutional definitions, of helping to facilitate changes and benefits to a wider range of stakeholders (UKRI 2021), and having both academic and social impacts (Vitae 2021). There are also examples which suggest that social media can be useful in terms of evidencing the reach of an impact (Fast Track Impact 2021), which is a key component of REF impact case studies. However, while examples were found pointing to the metrics associated with social media as proof of impact, which could indicate reach, the significance part is less easily illustrated through metrics alone. This highlights the need for academics to receive training in the terms and concepts associated with the impact agenda – to be informed about the need for both demonstrating reach and significance and actively look to find evidence for both in their interactions. There is also a question of institutional responsibility and safeguarding, as Universities stand to benefit from impact case studies, while it is individual academics who are involved in generating impact through social media and potentially exposed to risks of online abuse (Moriarty 2018). While this study did not find any evidence of negative impacts or ‘trolling’, it did not specifically ask about this, and this is a critical issue of concern affecting academics (Gosse et al. 2021; Veletsianos et al. 2018). There is increasing evidence of examples of academics being targeted by right-wing organisations through social media (Kamola 2019; Massanari 2018). Mirroring trends in the use of social media more generally, the negative effects will not be felt uniformly, as the platforms are well known to amplify hate such as racism, misogyny, transphobia, xenophobia, homophobia, and ableism. The extent to which platforms engage with protecting users from hate and abuse varies (Lima 2021). Furthermore, given the widespread use of precarious contracts and job positions within academia, there may be more pressure upon the very academics who are least likely to be protected by institutional policies.

If the contributions of members of the public were to be used as evidence of ‘impact’, this also raises potential ethical questions about whether interaction through a social media platform constitutes consent for this type of purpose. While recent research found that social media users are less concerned about the use of their data by researchers, compared to employers, marketers and political parties (Gruzd and Mai 2020), those gathering impact evidence should ensure that individuals’ identities are protected if a tweet is included when publishing a case study, for example.

Recalling the institutional definitions of impact introduced in the introduction, it is striking that a much wider range of interactions were highlighted by the participants. It is also notable that whereas the institutional definitions present impact as a top-down, outward flow of communication from academics and their research activities to a waiting public (see the three themes identified under ‘outward flow’ of information), the responses also highlight that academics themselves can actively benefit from the interactions with a wider public as a result of promoting their research (the three themes discussed under ‘inward flow’). This finding raises a question of whether it would be useful to expand the institutional definitions of research impact to include a wider range of types of impact and engagement. It is notable that many of the examples given by participants are more clearly examples of public engagement rather than research impact. This suggests that training may be useful for academics to raise awareness of the different definitions of research impact and engagement used in different contexts, to be aware that what would be appropriate evidence in different contexts.

The second research question investigated whether types of research impact varied according to different social media platforms. This question is of practical significance for academics and training, in order to better understand the affordances of specific platforms, as ‘social media’ is an umbrella term. The sub-sample sizes according to platform varied substantially, which limited the extent to which comparisons could be drawn. However, the data suggest different profiles of use across the four most frequently used platforms. For example, while *Facebook*, LinkedIn and Twitter were all strongly associated with ‘amplified dissemination’ and ‘developing self, blogs

demonstrated a different pattern, taking a slightly different and potentially more useful role in terms of active engagement, notably being associated with ‘novel engagement’ to a greater extent. It is also notable that platforms which reflect more personal, rather than professional, aspects of identity such as *Facebook* (Jordan 2020) – are nonetheless seen as useful for facilitating research impact. The wider range of activities perceived as ‘impact’ through social media – and association with different platforms – is also reflected in the contrasting prevalence of platforms mentioned here, compared to the REF impact case studies (Carrigan and Jordan 2021).

This study has limitations, and these limitations could be addressed in future follow-up research. An online survey was selected as the main research method for the study, in order to prioritise gaining a large sample of responses, rather than a smaller sample in more detail such as through interviews. By eliciting free-text responses, the survey was purposefully not constrained to pre-existing definitions or examples of impact through social media, which is appropriate for an initial, exploratory study on this topic. While this study has surfaced examples of what academics perceive to be high-impact interactions through social media, this is a starting point for further enquiry. A possible limitation of the study is that approximately half of the sample are in positions within Higher Education other than ‘lecturer’ or ‘professor’, and unlikely to have experience of formal research audit processes such as the REF yet. This is also a benefit, in that it explores a wider range of perspectives. It would also be useful to explore academics’ own views around the themes which have been identified and attitudes towards research impact and social media overall. The differences emerging according to the platform are interesting, but the sub-sample sizes prevented a wider range or more robust examination of the platformised nature of research impact. This would also have highly practical implications, in terms of academic practice and understanding the nuances of using different platforms. Finally, the study was purposefully open in terms of not providing a specific definition of impact and allowing respondents’ to use their own examples. A corresponding follow-up study could provide set institutional definitions of impact, and examine the contrasts in responses this might elicit.

## Acknowledgements

Many thanks to the individuals who participated in this study and also to those who helped to circulate the survey. I am also grateful to the Institute of Educational Technology at the Open University, UK, for hosting as a visiting research fellow to undertake the project.

## Disclosure statement

No potential conflict of interest was reported by the author(s).

## Funding

This work was supported by the Society for Research in Higher Education (SRHE) through an SRHE Newer Researchers Award.

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