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A Framework for Amplifying the Teaching-Research Nexus Impact: Leveraging Altmetrics via Figshare

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This concise paper explores as work in progress a collaborative discussion-based webinar series that develops and amplifies understandings of the teaching-research nexus. Aimed at early and mid-career university academics, the series implements a design-based research framework using alternative publishing via Figshare and dissemination through social media networks of the recordings of live online webinars. The webinars feature a panel of invited Deans Teaching and Learning from across the university in collaboration with three higher education research specialists. Results of ongoing analysis of development, engagement, outcomes, and impact are presented, and a preliminary framework is advanced for developing and amplifying understanding of the teaching-research nexus.

Keywords: Altmetrics, Teaching-Research Nexus, Researcher development, Higher Education

Introduction

University academics typical workload encompasses three main domains: research, teaching, service. The intersection between research and teaching has been called the teaching-research nexus. The reality at many universities is the expectation, whether implicit or explicit, that early and mid-career academics must negotiate this nexus, demonstrating the ability to narrate activities, impact and engagement in this space as they build their academic profiles. Different strategies for supporting the development of a personal narrative and evidence around the nexus have been suggested (Geschwind & Broström, 2015; Taylor, 2007). With the rapid development of alternative research impact metrics (Williams & Padula, 2015) and shifts in the adoption of synchronous and asynchronous collaboration technologies in response to COVID-19 (Lowenthal et al., 2020) there are new opportunities for creatively exploring ways of supporting the development of the teaching-research nexus across universities (Blaschke, 2020). One such strategy we proposed and have prototyped is the facilitating of dynamic collaborative conversations hosted by a panel of Associate Deans Teaching and Learning and educational specialists via a six-part webinar series – both live and recorded. We developed a framework around the webinar series to amplify its impact through hosting the episode recordings on an institutional Figshare platform and social media mentions to demonstrate impact through tracking associated Altmetrics scores.

Methodology

The Higher Education Teaching Research Nexus (#THETRN) project involves the collaborative development of a six episode (bi-monthly) webinar series designed to scaffold early-career (ECR) and mid-career (MCR) researcher capabilities across the university. A series of topics focus upon the nexus between teaching and research in different disciplines. The webinar series is conducted live and recorded for asynchronous viewing and curating as a Professional Development resource. Each webinar is comprised of a core group/panel including five invited Deans Teaching and Learning and three teaching and learning specialists that crosses several of the university faculties exploring open educational practice and research, with episode guests from all of the 10 university faculties throughout the 6 episodes over 2022. The webinar series follows a dynamic conversational model that was developed across an earlier webinar series designed to explore teaching and research issues in response to COVID-19 throughout 2020 and 2021 (Deneen et al., 2021). We use design-based research (DBR) as a foundational model (McKenney & Reeves, 2019) to develop and evaluate the impact of a webinar series for the goal of developing and amplifying the teaching-research nexus impact across the university. DBR is comprised of four phases: analysis and exploration of a problem and potential design principles, initial prototyping of a solution/intervention, implementation and evaluation followed by a redesign-

evaluation loop, development of transferable design principles. In this paper we explore the initial design prototype in the first three episodes of the six-part series. Doing so at this point allows for analysis and adjustment of the model and a reflection on the ongoing impact evidence relevant to the framework.

Research question

What is an effective model/framework for developing and amplifying the impact of the teaching-research nexus in response to COVID-19?

Competitive internal funding was applied for and received for administration and dissemination of the webinar series and for evaluating the impact of the 6 webinar episodes. The series is a collaboration between the Centre for the Study of Higher Education, the Researcher Development Unit, and the faculty Associate Deans Teaching and Learning.

Framework

Prior to COVID-19 most researcher development and professional development seminars were delivered face-to-face in physical rooms on campus. During COVID-19 seminars were delivered live online, with up-coming events advertised through Centre webpages and registration details circulated via email newsletters alongside Twitter and Yammer social networks. These online seminars or webinars are recorded and shared asynchronously post event on a university-branded Vimeo subscription platform embedded within a university webpage with episodes advertised through a university-wide email newsletter. With the THETRN framework the 'traditional' webinar series model is enhanced (amplified) through the addition of the university hosted Figshare publication platform that is used to host and curate the recorded webinar episodes, and publicly publish each episode with associated metadata and a unique Digital Object Identifier (DOI), as illustrated in Figure 1. Each published episode recording is then described and embedded in a university hosted SOTL network blog post and shared on three social media networks including Twitter, LinkedIn, and the university Yammer network. The social media mentions drive asynchronous participants to view or download each episode from Figshare. By including the episode DOI in social media mentions each episode gains an Altmetrics score that is then automatically curated into the panel members research elements profiles, providing an additional impact metric and research feedback loop making the intersection of the TRN more explicit.
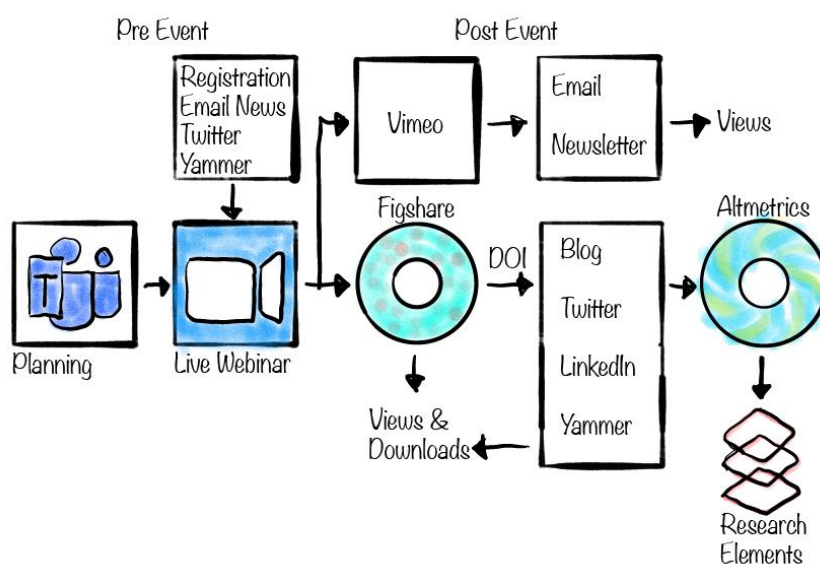

Figure 1: A framework for amplifying researcher development impact

The collaborative webinar design team meet via Zoom monthly prior to each episode to brainstorm and choose topics that are currently relevant to the target participants. Microsoft Teams is used to facilitate documentation of the design process, share relevant resources, and coordinate the webinar development team. We chose Figshare as the hosting platform for the episode recordings as it is supported through an institutional license subscription, can be directly automatically linked to a user's institutional research profile, guarantees a permanent DOI for hosted media, and supports direct sharing to the two main social media platforms that we tracked through Altmetrics (Twitter and LinkedIn).

Initial Findings

In this section we explore an initial analysis of the first three episodes through anonymous participation and social media metrics.

The participants of the THETRN webinar series include the discussion panel as described previously and the target audience participants (ECRs and MCRs). A demographic poll conducted during the second episode of the series (Figure 2) indicated that the series attracts 64% of synchronous participants from its main target group.
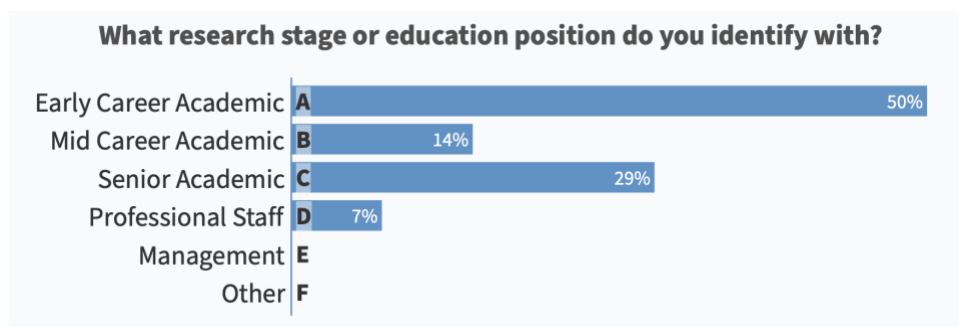
What research stage or education position do you identify with?

Early Career Academic	A	50%
Mid Career Academic	B	14%
Senior Academic	C	29%
Professional Staff	D	7%
Management	E	
Other	F	

Figure 2: THETRN Webinar participant demographic poll results.

Topics explored in the first three episodes of the webinar series have included:

1. Altmetrics for amplifying research impact.
2. Developing your teaching-research nexus: Identity, performance and methodologies.
3. Narrating your TR Nexus, publication, impact and engagement, funding and resource building, Meta-Nexuses: Joining and developing TR networks and moving beyond the academy.

Table 1 collates and compares basic episode metrics between traditional and altmetrics metrics.

Table 1: Initial Impact Metrics

	Episode#1	Episode#2	Episode#3
Live Webinar Attendees	20	17	15
Weeks since recording	16	8	1
Traditional Website Views	65	75	15
Vimeo Views	8	21	5
Figshare Views	351	195	93
Figshare Downloads	32	10	10
Twitter Post views	259	855	171
LinkedIn Post views	233	220	50
Yammer Post views	551	222	236
Altmetrics Score	3	1	2

Figure 3 and Figure 4 summarise the first episodes' recordings web page statistics from a total of 155 webpage views throughout March to July2022.
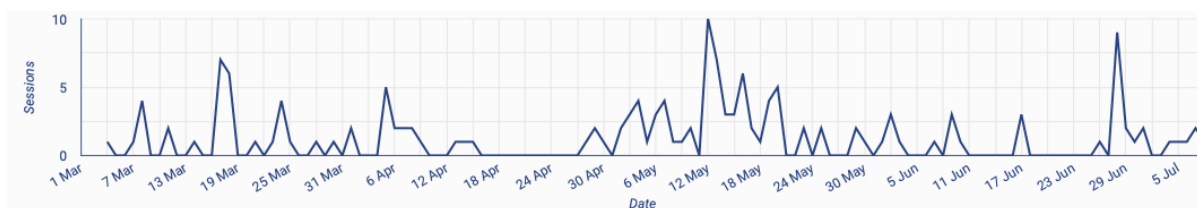

Figure 3: Webinar Vimeo recordings webpage views – March to July 2022

Webpage views show peaks associated with email newsletter and social media mentions of each episode followed by smaller numbers of views in between episodes via web searches.
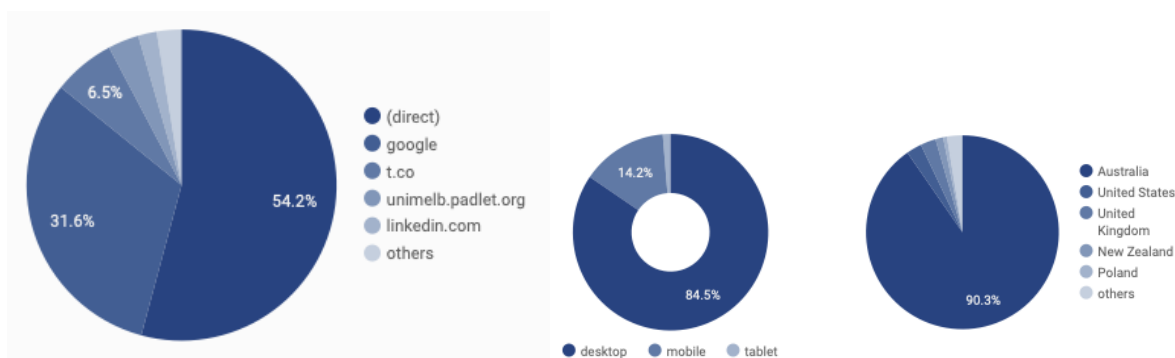

Figure 4: Webinar Vimeo recordings webpage statistics – March to July 2022

Webpage referrals, device and country pie graphs indicate the 'traditional' webpage hosted recordings attract predominantly a local audience, as does Yammer – an institutional social network, whereas Twitter and LinkedIn analysis indicates wider global reach beyond our institutional target audience to a wider global network of ECRs and MCRs.

While we had hoped that the webinar series would be effective in supporting the development of the Teaching-Research-Nexus (TRN) we had envisioned greater live participation in the episodes beyond the core panel group, leading to a responsive interaction with the audience/target group. What we have found so far is more impact through the asynchronous viewing of the episode recordings. An emergent point for analysis, therefore, whether if covid19 'burn-out' has impacted synchronous participation in events that are perceived to be of a business-as-usual professional development activity. An emergent possibility for future research is to explore hosting (while simultaneously live-streaming and recording) episodes face-to-face on campus to explore if social dimensions would influence live participation numbers.

The project has facilitated collaboration between the associate Deans Teaching and Learning and the team of educational specialists, with the intention of leading to further collaborative activities around enhancing understanding and explorations of teaching and research connectivity. The series has also provided a pathway for the associate Deans Teaching and Learning (and the wider participants) to gain critical understandings of the differences in the TRN across discipline silos. We anticipate that this will lead to more transdisciplinary collaboration across the university faculties in the future (Burnett, 2011).

A core suite of social networks (Twitter, LinkedIn, Yammer) that link altmetrics to the DOI of the recorded episodes hosted on Figshare were utilized. These provide both wider impact and facilitates a feedback loop into the university research elements database. This effectively adds to the research output profiles of the panel. Ongoing analysis has already suggested, however that maximising altmetrics impact necessitates a cultural shift. This includes accepting and integrating engagement with 'effective' social networks (Haustein, 2018; Lamba, 2020) as part of academics' workflow. To date, this proven a robust but challenging process, particularly Associate Deans Teaching and Learning who were new to the concept of using altmetrics via Twitter, LinkedIn, and Blogging for amplifying impact. This represents a tension with and movement away from the traditional approaches of relying upon email newsletters to broadcast and advertise events, which have demonstrated

decreasing effectiveness since COVID-19, due in part to online burn-out over increased email inbox bloat. The targeted use of social networks have potential to create a more conversational and participatory approach to sharing event details and feedback and represents a 'pull' model rather than the 'push' model of centralized email.

Next Stages

Three further episodes are scheduled for the rest of 2022. Ethics consent will be submitted for qualitative evaluation and impact analysis through participant focus groups and feedback surveys at the end of the series. We will also explore creating more awareness around the institution of the link between Figshare and Altmetrics for amplifying the impact of non-traditional research contributions, and scaffolding the adoption of Twitter and LinkedIn for academics not already utilizing these platforms effectively.

Conclusions

Initial analysis of basic episode metrics indicates impact through the wider participation from the target audience for the series beyond the live synchronous webinar sessions, with significantly higher views and downloads of the recordings through Figshare and advertised through three social networks – Twitter, LinkedIn, and Yammer. The impact of the series on actual development of the teaching research nexus (TRN) for ECRs and MCRs will need deeper exploration through qualitative analysis of subsequent focus groups and participant surveys. Anecdotal feedback from the participating Associate Deans Teaching and Learning is that the series has become a valuable addition to their strategies for supporting the TRN development in their faculties.

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