

## **From a network model to a model network: strategies for network development to narrow the LIS research-practice gap**

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### **Abstract**

**Purpose** The purpose of the empirical study was to examine whether strategies shown to work well in one model of network development for Library and Information Science (LIS) practitioners and researchers can be applied successfully in the development of a new network.

**Design/methodology/approach** The 32 members of a new network were surveyed by questionnaire following the completion of a programme of four network events held between 2019 and 2021.

**Findings** The analysis demonstrates the transferability of the existing model of network development to a new network, and that it can be successfully adapted for online delivery of network events and activities.

**Originality** This contribution on means of growing collaborative networks to narrow the LIS research-practice gap stands out in contrast with prior research that tends to focus the support of research productivity of academic librarians in North American universities for the purposes of career development. Here wider aspects of research engagement are considered of value for LIS practitioners from a range of sectors and institutions, beyond North America, for purposes that are broader than personal advancement.

**Practical implications** The criteria deployed for the evaluation of the new network could be deployed in other similar settings. Funding bodies can also use these findings as demonstration of the value of their investment in network grants

### **Keywords**

collaboration, evaluation, network, research-practice gap

## **1 Introduction**

The research discussed in this paper focuses on testing the value of a model of network development for library and information science (LIS) practitioners and researchers. The model was previously introduced and discussed with reference to the creation of a single network - Developing Research Excellence and Methods (DREaM) - in three papers published in the *Journal of Documentation* between 2013 and 2019 (Cooke and Hall, 2013; Hall, Cruickshank and Ryan, 2018; Hall, Cruickshank and Ryan, 2019). The main elements of the DREaM model were applied in the establishment of a new network entitled RIVAL in Scotland in 2019. The primary research question addressed here is: *How transferable are strategies shown to be successful in one model of network development (DREaM) to another (RIVAL)?*

The findings are drawn from an analysis of questionnaire data collected in 2021 from all 32 members of RIVAL. The analysis reveals that RIVAL was largely successful in meeting its main objective to bring together LIS practitioners and researchers interested in maximising the impact and value of LIS

research, and the network members benefitted from new learning and increased confidence garnered through network participation. The sudden and unanticipated shift in RIVAL's operating environment from in-person to virtual meetings – due to COVID19 lockdown restrictions imposed from March 2020 onwards – was found to be significantly less disruptive than initially feared. The analysis demonstrates the transferability of the original model from one network to another, and that it can be successfully adapted for online delivery.

The main novel contribution of this research is the development of understanding of the means of growing collaborative networks between practitioners and researchers, within LIS and beyond, in in-person and online environments, to narrow the LIS research-practice gap. Unlike most prior studies that have considered the question of this research-practice gap, the research presented here was conducted outside North America, with LIS practitioners from a range of sectors and organisations (i.e. not solely academic librarians from a single institution), with reference to advantages of research engagement that extend beyond the enhancement of research productivity for the purpose of career advancement. This paper is also a contribution to the extant body of literature that addresses prior calls to explore network participation and its benefits beyond the presentation of network topologies so that knowledge of research collaborations may be strengthened, and funding bodies may understand their return on investment in networking grants (e.g. Hall et al, 2019). This is done with reference to evaluation criteria such as practitioner use of research, and practitioner research per se. In terms of the research approaches adopted, the use of Social Network Analysis (SNA) provides a further example of its deployment in LIS, adding to the extant body of work on the technique in this field (e.g. Alam, Khusro, Ullah and Karim, 2017; Cooke and Hall, 2013; Kennedy, Kennedy and Brancolini, 2017; Mowbray, Hall, Raeside and Robertson, 2018; Schultz-Jones, 2009).

The paper is structured as follows. First, the context for the research is given, along with coverage of three main themes in the extant literature: (1) the research-practice gap in LIS; (2) LIS practitioners as researchers; and (3) research collaborations between LIS practitioners and researchers. Then the extent to which the earlier model of network development informed the design and implementation of RIVAL is outlined. Presented next is the approach adopted for the empirical study to evaluate the effectiveness of RIVAL, with the results of the evaluation to follow. The paper concludes with a discussion of the main findings from the evaluation, and their implications.

## 2 Literature review

### 2.1 *The research-practice gap in LIS*

The research-practice gap is a recurrent theme in the LIS literature (e.g. Bawden and Robinson, 2022, p. 328; Booth, 2011, p. 9; Borrego, Ardanuy and Urbano, 2018, p. 664; Partridge, Given, Abdi, Buchanan, Bunker, Luca, McKay and Narayan, 2019, p. 561; Spring, Doherty, Boyes and Wilshaw, 2014, p. 142). It has concerned commentators for decades: see, for example, Williamson (1931). A lack of mutual understanding is cited as the core reason that the two communities struggle to collaborate (e.g. Chang, 2016, p. 540).

Discussion of the negative impact of the divide between the two communities focuses on lost opportunities. For example, new knowledge generated by researchers of potential value to service improvement remains unexploited (Partridge, Haidn, Weech, Connaway and Seadle, 2014, p. 37; Pickton, 2016, p. 105). Similarly, service needs that might be obvious to practitioners are isolated

from the research agenda of academics who do not have sight of 'real-life' priorities for research (e.g. Ardanuy and Urbano, 2017, p. 318). These factors risk stagnation of librarianship – both as a profession, and as a discipline (e.g. Aytac and Slutsky, 2014, p. 147; Hall, 2010, p. 85; Powell, Baker and Mika, 2002). The parties on both sides of the research-practice gap bear responsibility for this, as recently noted in the second edition of a core LIS textbook: 'Academics and practitioners have a joint duty to carry out appropriate research, to be aware and make use of existing research findings and to communicate across the academic-practitioner divide on these issues' (Bawden and Robinson, 2022, p. 341).

A common complaint expressed by the LIS researcher community is that LIS practitioners fail to engage with research, even at the most basic level of reading the scholarship of their professional domain (e.g. Horowitz and Martin, 2013, p. 80). It is observed, for example, that unless librarians have been directly involved in a particular project, they rarely make use of research outputs (Hall et al, 2019, p. 1060). Furthermore, recent longitudinal research provides 'disturbing' evidence that LIS practitioners are becoming more disengaged from the literature of the domain over time, notably in the higher education sector (Kennedy and Brancolini, 2018, p. 840). This has been illustrated in statistical analyses of the publishing practices of LIS practitioners: although some *do* publish their own research (e.g. Chang, 2016, p. 535), especially when supported by their employers (e.g. Pickton, 2016, p. 108), the tendency is to submit to the professional press rather than to peer reviewed journals (e.g. Clapton, 2010, pp. 3-14). Indeed, in recent years it has been observed that the percentage of practitioner-authored articles in peer reviewed journals is on the decline (Finlay, Ni, Tsou and Sugimoto, 2013, p. 404). While the practitioner-researcher practice of publishing in titles that are targeted at fellow practitioners has the advantage of providing access to research outputs in a format that is easily assimilated by peers, the academic audience is unlikely to see this work. A consequence of this is a lowering of the potential value and impact of the research that is reported in the 'non-academic' press.

Several reasons account for the lack of LIS practitioner interest in reading to support their practice. These relate to three factors: (1) relevance of content; (2) access to content; and (3) resources. Attention is drawn in prior work to the problem that the authors of reports of academic research often appear unaware of the concerns and job demands of LIS practitioners (e.g. Booth, 2011, p. 7), undertaking studies that are irrelevant to the priorities of LIS services provision (e.g. Detlor and Lewis, 2015, p. 10; Hall, 2010; Nguyen and Hider, 2018, p. 14; Turner, 2002, p. 4). Even when the subject matter may be of interest, much published research – including the large proportion authored by academic librarians (Chang, 2016; Galbraith, Smart, Smith and Reed, 2014; Luo and McKinney, 2015) – is so context-specific that it cannot be generalised to other environments, and fails to draw direct attention to the implications of the research for practice, and/or lacks actionable recommendations (e.g. Horowitz and Martin, 2013, p. 80; Turner, 2002, p. 4). A further complaint is the ineffective means by which LIS researchers disseminate their research (e.g. Ardanuy and Urbano, 2017, p. 318). For example, it is often published in journals that LIS practitioners do not – or cannot – access, or disseminated so long after the completion of the empirical study in question that it lacks value (e.g. Booth, 2011, p. 7; Partridge et al, 2014, p. 38; Turner 2002, p. 4).

The third broad reason for the apparent low LIS practitioner interest in published LIS research concerns resources, principally time. Busy LIS practitioners regularly experience information overload and are often too time-impoorished to devote effort to make sense of research outputs, especially if they are poorly written (e.g. Booth, 2011, p. 7; Carson, Colosimo, Lake and McMillan, 2014, p. 3;

Chang, 2016, p. 536; Given, Partridge and Howard, 2022, p. 5; Kennedy and Brancolini, 2012, p. 436; Nguyen and Hider, 2018, p. 11; Pickton, 2016, p. 107; Turner, 2002, p. 4).

The issue of time is also often cited in respect of the low numbers of LIS practitioners who undertake research themselves as practitioner-researchers (e.g. Spring et al, 2014, p. 148). Inadequate training in research methods is also offered as a reason for this (e.g. Crampsie, Neville and Henry, 2020, p. 259; Given et al, 2022, p. 5; Hoffman, Berg and Koufogiannakis, 2017, p. 104). Furthermore, LIS practitioners who would benefit from enhancing their skillsets, and might enjoy active research work, are not sufficiently encouraged to do so (e.g. Aytac and Slutsky, 2014, p. 147; Babb, 2021, p. 14; Detlor and Lewis, 2015, p. 10; Hall and McBain, 2014, p. 131; Luo and McKinney, 2015, p. 124).

## 2.2 LIS practitioners as researchers

For one community of LIS practitioners, however, adoption of the role of practitioner-researcher is critical to career advancement: for academic librarians in North America research productivity is generally a requirement for promotion and tenure (as noted, for example, by Babb, 2019, p. 2; Crampsie et al, 2020, p. 253; Kumaran, 2019, p. 2; Schmidt, Boczar, Lewis and Taylor, 2021, p. 1). Although not exclusive to a subset of LIS practitioners in this one geography (e.g. Fiawotoafor, Dadzie and Adams, 2019; Pickton, 2016), this position is largely in contrast with that in other LIS sectors, and in different parts of the world.

Because of this, most publications about research-engaged LIS practitioners focus on the identification of determinants of research *productivity* with an eye on *career progression* in North American universities. Thus empirical studies on this subject typically involve the collection of data from academic librarians, based across institutions in this one region of the world, on mechanisms to support the production of research outputs in the form of papers. These comprise collaborative writing groups, mentoring programmes, peer support groups, internal research fora, journal/reading groups, and the employment of research facilitators (e.g. Hoffman et al, 2017; Kennedy and Brancolini, 2012 & 2018; Kennedy, Brancolini and Kennedy, 2020; Kumaran, 2019). In some cases, such reports may focus on a single university (e.g. Fennewald, 2008). See Table I for examples.

Mechanism to support the production of research outputs	Focus of sample paper	Site/participants	Reference
Collaborative writing groups	Case study of a writing group	1 academic institution - US	Campbell, Ellis and Adebajo, 2012
	Case study of two writing groups	2 academic institutions - US	Exner and Houk, 2010
	Case study of a writing group	Mainly academic librarians from several institutions - Ireland	Fallon, 2012
	Case study of a writing group	1 academic institution - Australia	Sullivan, Leong, Yee, Giddens and Phillips, 2013

	Case study of a writing group	1 academic institution - US	Tysick & Babb, 2006
<b>Mentoring programmes</b>	Empirical study on the effectiveness of mentoring programmes for novice tenure-track librarians	Several academic institutions - US	Goodsett and Walsh, 2015
	Case study of a mentoring programme	1 academic institution - US	Kuyper-Rushing, 2001
	Case study of a mentoring programme	1 academic institution - US	Smigielski, Laning and Daniels, 2014
	Mentoring as one of several strategies to facilitate practitioner research	1 academic institution - UK	Pickton, 2016
<b>Peer support groups</b>	Formal and informal peer support groups identified as most important factor in support of research productivity	1 academic institution - US	Fennewald, 2008
	Peer support as one of several strategies to facilitate practitioner research	1 academic institution - UK	Pickton, 2016
	Case study of peer support	1 academic institution - US	Sapon-White, King and Christie, 2004
<b>Internal research fora</b>	Internal research forum as one of several strategies to facilitate practitioner research	1 academic institution - UK	Pickton, 2016
	Internal research forum as one of several strategies to facilitate practitioner research	1 academic institution - US	Stephens, Sare, Kimball, Foster and Kitchens, 2011

<b>Journal/reading groups</b>	Empirical study on the value of journal clubs for the development of academic librarians and services delivery	Academic librarians – Australia, Canada, New Zealand, UK, US	Fitzgibbons, Kloda and Miller-Nesbitt, 2017
<b>Employment of research facilitator, i.e. librarian in dedicated role to provide research support to colleagues</b>	Employment of facilitator as one of several strategies to facilitate practitioner research	1 academic institution - UK	Pickton, 2016

*Table 1: Initiatives to support practitioner research engagement: examples from the literature*

While this body of work is useful as evidence of support mechanisms for research activity amongst LIS practitioners, its value is mixed. This is because the accounts are often descriptive rather than evaluative, and too context-specific to be of relevance to a broad readership. In addition, some of the initiatives under consideration are not focused solely on research support (nor on the question of addressing the gap between LIS practitioners and researchers as actors). For example, several mentoring schemes examined in this body of literature are all-encompassing, relating to broader issues such as career development, career transitions, and workforce planning. Indeed, Kennedy and Brancolini (2018, p. 827) note that few detailed assessments of mentoring schemes are available, and much of the literature on mentoring as a form of research support merely *recommends* such activity, rather than demonstrates its benefit (for examples see Fiawotoafor et al, 2019, p. 34; Pickton, 2016, p. 122).

The evaluations of peer support programmes in this literature are, however, more convincing. For example, Fennewald's (2008) contention that formal and informal peer support is considered the most important factor for the underpinning of research productivity amongst librarians at Penn State University prefaces later research findings on the importance of a supportive operating environment (Hoffman et al, 2017). Similarly Pickton's account of peer support offered to librarians by a research professor (2016), and Detlor and Lewis' 'Faculty in residence' programme (2015), indicate routes to strengthening links between LIS practitioner and research communities in universities. The published outputs on journal clubs and reading groups as supports of research productivity are also important here because these encourage a form of scholarship in the consumption of the research literature (Fitzgibbons, Kloda and Miller-Nesbitt, 2017, p. 774; Pickton, 2016, p. 116).

As well as the mechanisms summarised in Table 1, a number of formal LIS practitioner (only) networks centred on research have been developed. These have been successful in bringing together LIS practitioners, overcoming barriers such as limited funding and cultural impediments to research engagement (Nguyen and Hider, 2018, p. 11), and time (Hoffman et al, 2017, p. 104). Most available examples are at the level of a single institution, such as: City University of New York (Cirasella and Smale, 2011); Flinders University Library, Adelaide, Australia (Hall, 2018); University of South Florida (Schmidt et al, 2021); and University of Western Ontario (Meadows, Berg, Hoffman, Gardiner and Torabi, 2013). In some cases, more than one institution is involved, for example, the Librarians' Research Partnership at McGill and Concordia Universities in Canada (Carson et al, 2014). These research-focused networks exclusive to practitioner participants may serve to narrow the research-practice gap to a degree, but their formation cannot do the same for the gap between researchers and practitioners.

The same can be argued for networking focused on research that is achieved through practitioner-only participation in other broader activities, such as the continuing education programme offered to US librarians through the Institute for Research Design in Librarianship (Kennedy and Brancolini, 2018, p. 828), and the annual Librarians' Research Institute workshops hosted by the Canadian Association of Research Libraries (Jacobs and Berg, 2013, p.227; Kumaran, 2019, p. 2). There are also opportunities for LIS practitioners based in universities to network online. For example, in 2017, academic librarians Heinbach, Powell, Fargo and Bhat (2019) 'created a community that supports library workers in conducting, writing, and disseminating research' (p. 477) based around a blog entitled 'Librarian Parlor'.

### 2.3 *Research collaborations between LIS practitioners and researchers*

The outputs cited above provide documented evidence of the general benefits of networking (e.g. Crampsie et al, 2020 p. 259-60; Kennedy et al, 2020, p. 191), and examples of the establishment of networks for academic librarians. However, there is little published evidence of such opportunities for LIS practitioners *across a range of sectors* to engage with LIS researchers about research for the purposes of building communities and/or developing their careers as practitioner-researchers (as noted by Hall, 2018, p. 615; Kennedy, et al, 2020, p. 181; Nguyen and Hider, 2018, p. 11; Turner, 2002, p. 4). Furthermore, Given et al (2022, p. 1) note that the networks that do exist are rarely explored in depth. Reports of LIS practitioner and researcher collaborations are also scant, as observed, for example, by Chang (2016, p. 535).

The divergence in interests of LIS researchers and practitioners (Nguyen and Hider, 2018, p. 11), and the related lack of understanding between the two groups (Joint, 2005, p. 294), are real challenges here, as is the fragmented nature of a profession in which practitioners work across a diverse range of contexts including public libraries, healthcare, and higher education (Spring et al, 2014, p. 148). Nevertheless, calls for the two communities to collaborate can be found in the literature. For example: Horowitz and Martin (2013) advocate that LIS practitioners should attend conferences targeted at researchers and vice versa, and that the two parties should reach out to one another, to explore research questions jointly (p. 80); Nguyen and Hider (2018) argue that collaborative endeavours should be initiated by academics (p. 16).

Many examples of attempts to narrow the research-practice gap for the wider community of LIS practitioners and researchers relate to small-scale, and often short-lived, initiatives. These have included: journal clubs (Booth, 2011, p. 12); one-off joint activities, for example, projects, event organisation, and publishing (e.g. Eve and Schenk, 2006); and some mentoring and training activities such as those sponsored by special interest groups of national professional bodies, for example, the UK's Library and Information Research Group (LIRG) (Special interest group... 2022). There has also been some activity at a global level led by the International Federation of Library Associations (IFLA) (Partridge et al, 2104, p. 47; Tammara, 2018, p. 2). A more sustained approach, and one that has been proved empirically to narrow the gap, is the use of evidence summaries, as advocated by Haddow and Klobas (2004), and Kloda, Koufogiannakis and Brettle (2014).

Two much larger funded initiatives at national level are of note here. These are Library and Information Science Research Australia (LISRA) (Partridge et al, 2019, p. 561), and the UK Library and Information Science Research Coalition (Hall, 2010), as well as the projects that these two initiatives have spawned. For example, in 2017 LISRA's Research Assistance and Development for Australian Researchers (RADAR), grant funding fostered collaborative research between LIS practitioners and

academics, and developed a community of practice amongst members of the teams selected for funding (Given et al, 2022; Partridge et al, 2019, p. 562). In the UK between 2009 and 2012, the LIS Research Coalition assembled resources to bring LIS practitioners and researcher together (see, for example, Hall, Irving and Cruickshank, 2012). These included a Twitter feed at @LISResearch, which has outlived the funded period of the project for a decade.

Of most significance to discussions of the means of connecting LIS practitioner and researcher communities is the UK LIS Research Coalition's involvement in the DREaM project, the primary goal of which was to develop a formal UK-wide network of LIS researchers. In 2011-12 more than 200 LIS practitioners and researchers actively engaged in DREaM by attending some, or all, DREaM network events: a launch conference, three research methods workshops, and a concluding conference (Cooke and Hall, 2013, p. 791).

In 2015, three years after the end of DREaM, the core of the network membership took part in an evaluation of the impact of their participation in the workshops (Hall et al, 2018; 2019). This exercise generated three key findings. There were that, since the project conclusion, the network members from both the LIS practitioner and researcher communities had: (1) worked together to collaborate on research funding bids, the majority of which were successful (Hall et al, 2019, p. 1065); (2) jointly organised a range of events, including major international conferences (Hall et al, 2019, p. 1069); and (3) collaborated on research dissemination activities, from internal presentations to co-authored journal articles and book chapters (Hall et al, 2019, p. 1065-1066).

These positive outcomes, it is argued, resulted at least in part from the ways in which the workshops were organised and delivered. These mechanisms are encapsulated in four key recommendations for future network development initiatives (Hall et al, 2018, pp. 857-858) to:

1. Build social capital amongst the membership through the facilitation of social interactions unrelated to work;
2. Deploy social media as form of network infrastructure;
3. Nurture core network members for long-term sustainability;
4. Continue to resource the network beyond the funded period.

In this prior work it is also concluded that physical proximity of subsets of network members helps maintain relationships in the longer term (Hall et al, 2018, pp. 856). Furthermore, a close reading of Hall et al (2019) highlights other aspects of DREaM important to strengthening links between LIS practitioners and researchers in formal networks. These include: placing a limit on the number of network members (p. 1061); insisting that participants commit to participation in the majority of network events (p. 1062); providing for ad hoc network member presentations at each event (p. 1062); and offering sessions with broad appeal (p. 1073).

#### 2.4 *Key messages from the literature review*

It has been established that much has been written about the causes and consequences of the research-practice gap in LIS, with most research attention devoted to mechanisms that support academic librarians in North America in establishing/increasing their research productivity, and prospects for career progression. Fewer studies have been undertaken to consider means of encouraging LIS practitioners from across a wide range of sectors to engage with research - from taking interest in reading outputs to collaborating directly with LIS researcher peers or becoming

practitioner researchers (as noted, for example by Chang, 2016, p. 535). Even less attention has been paid to possible strategies to persuade LIS researchers to engage with practice.

Key amongst the material about nurturing LIS practitioner-researcher relationships are the recent studies of the outcomes of funded initiatives in Australia and the UK. These show the benefits of bringing LIS practitioners and LIS researchers together at network building events (e.g. Partridge et al, 2019, p. 562). The evaluation of the DREaM model of network development for LIS practitioners and researchers (Hall et al, 2018 & 2019) provides pointers for good practice in future similar initiatives.

Learning from DREaM was considered in the establishment of RIVAL in 2019, the details of which are presented below. The effectiveness of replicating the key aspects of the DREaM model of network development were then reviewed at the conclusion of the funded period of RIVAL. This allowed for the following main research question to be addressed in the study reported here: *How transferable are strategies shown to be successful in one model of network development (DREaM) to another (RIVAL)?* The unexpected necessity to switch to online network events also gave the opportunity to explore whether the DREaM model is robust enough to support network building in virtual environments.

### 3 The establishment and delivery of RIVAL

#### 3.1 Funding of RIVAL

RIVAL was supported by a grant of £20,000 awarded to a team of researchers at Edinburgh Napier University by the Royal Society of Edinburgh in December 2018. The funding was to cover: the hosting of four in-person knowledge exchange network events (e.g. venue-hire, catering); network member participation in the events (principally travel<sup>1</sup>); and administrative support. When the project started in February 2019, the intention was to run one-day events in July 2019, November 2019, March 2020, and July 2020 in Edinburgh. However, COVID19 lockdown restrictions imposed from March 2020 necessitated adaption of the initial plan, with a no-cost extension granted by the funder. In practice, RIVAL was delivered over five meetings, with the last three held online in November 2020, January 2021, and February 2021.

#### 3.2 Membership profile of RIVAL and anticipated benefits of membership

It was anticipated that RIVAL members would comprise:

- LIS practitioners keen to apply the output of academic research in LIS services delivery across the full range of library sectors in Scotland. *This was partially achieved with RIVAL members representing the academic, national, government, school, and special library and information services sectors in Scotland.*
- LIS researchers from the four universities that offer LIS programmes in Scotland. *In practice, academics from all four participated in network activities, with all but one holding network membership.*
- Other Scotland-based professionals working in areas strongly tied to LIS research. *This representation was achieved as expected.*

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<sup>1</sup> 91% of the RIVAL membership could comfortably travel to Edinburgh and back for a one-day meeting.

Members were recruited through a marketing campaign that included in-person dissemination of news of the establishment of the network at professional events, by sending messages to mailing lists, and through personal contacts. For example, a poster on the award of the grant was delivered, and flyers advertising the opportunity for membership distributed, at the Edge conference in March 2019 (Hall and Ryan, 2019); invitations to join the network were issued to Scotland-based individuals who had attended an earlier event on research impact and value hosted by Edinburgh Napier University in summer 2018 (Hall, 2018). It is also worth highlighting that four RIVAL members were alumni of the DREaM network research methods workshops in 2011/12. They were two academics (one still a PhD student in 2011/12) and two academic librarians (one of whom worked in a public library service in 2011/12).

A full list of the 32 RIVAL network members is available at <https://lisrival.com/rival-people/rival-network-members/>. Here it can be seen that the career-stage profile of the membership ranged from junior to senior levels: PhD student to professor in the case of researchers; first professional post to service director in the case of practitioners. Their professional skills and interests are given at <https://lisrival.com/rival-people/rival-network-members-lis-skills-and-interests/>. The majority of RIVAL network members originated from Scotland, and shared the same first language.

Taking into account the success of DREaM in creating a network through a programme of workshops events (Cooke and Hall, 2013), and the impacts of this strategy (e.g. collaborative research endeavours between network members, enhanced learning, and a narrowing of the research-practice gap in general (pp. 1065-1070)), the development of RIVAL along the same lines was expected to reap similar benefits. For example, it was hoped that LIS practitioner network members would gain insight into research findings that could be applied to the development of services, as well as influence future research through the generation of research ideas in collaboration with LIS researchers. Meanwhile, LIS researchers would gain opportunities to increase the impact and value of their research, and further appreciate LIS practitioners' research priorities. LIS researchers would strengthen their relationships with peers in other universities in Scotland, thus identifying possible partnerships for future research. They would also be exposed to 'research-aware' practitioners willing to collaborate in such research.

Another key objective of value was to ensure that content produced over the course of the project would remain available online to all, thus extending its potential use and impact beyond the core network members.

Other anticipated outcomes included: new, and strengthened, relationships between network members; increased confidence amongst practitioner participants; evidence of practitioner participants' efforts to integrate learning from RIVAL into service provision; evidence of researcher participants' incorporation into their research the needs expressed by practitioners; and a model of network development for researcher-practitioner communities that could be applied in other domains. Anticipated outcomes that were deemed more likely to occur after the funded period included: improvements in LIS service delivery stemming from knowledge exchange at RIVAL events; and initiation of new projects, including collaboration between academics and practitioners.

### 3.3 *Format of RIVAL Events 1-4*

Events 1, 2 and 3 were focused on showcasing partnerships between LIS academics and professionals. Each included an opening keynote, 'research into practice' case studies delivered by LIS researchers and practitioner beneficiaries, and network building activities. There were no initial

plans for Event 4. Instead, time was allocated at the first three events for network members to discuss the format of Event 4. This was so that they would 'own' part of the project's delivery. At the outset, budget was retained for Event 4 to fund the activities determined by the network members.

By the conclusion of Event 2, members had settled on working towards four tangible project outputs at Event 4. Four teams to achieve this were established just before Event 3. The teams and outputs were:

1. Team A: a further network event to be hosted and resourced by a member's organisation after the funded period, when the removal of pandemic restrictions would allow<sup>2</sup>.
2. Team B: a practitioner-oriented article. This was published in March 2021 (Castle et al, 2021).
3. Team C: the development of a joint funding bid for a large research grant.
4. Team D: an evaluation of RIVAL against its initial aims. A formal project report was produced in March 2021.

For Event 3 in November 2020, the scheduled speakers recorded presentations for members to watch in advance of a half-day meeting. At the meeting itself, the presentations were discussed with the speakers in an online panel session, there was an opportunity for network members to deliver 'live' their own short presentations over Teams, and the four output teams started working together.

Event 4 was split across two half-days in January and February 2021, during which the teams worked solely on the outputs.

### 3.4 *Incorporation of recommendations and tips from published accounts of the DREaM project in the organisation and delivery of RIVAL*

Throughout the planning and delivery of RIVAL, attention the main messages from the papers about the evaluation of the DREaM project (Hall et al, 2018 & 2019) were heeded. Table II shows the impact of DREaM on the implementation decisions for RIVAL.

<b>Recommendation/tip from the DREaM network</b>	<b>Implementation in RIVAL</b>
<p><i>Recommendation: provide for social interaction</i></p> <p>'Opportunities for social interaction... should be nurtured in networks. Efforts to do so increase social capital amongst network members and underpin future work-related networking.'</p> <p>(Hall et al, 2018, p. 857)</p>	<p>Events 1 and 2 included face-to-face exercises/activities that encouraged social interaction. In addition, Event 2 included a post-event museum tour, followed by drinks in a bar near to the venue.</p> <p>Event 3 included break-outs for discussions in small groups.</p>
<p><i>Recommendation: deploy social media</i></p> <p>[Social media] 'furnishes another "place" in which network members can maintain contact with one another... network development should pay attention to the building of an online infrastructure suitable to support</p>	<p>A web site was set up for RIVAL. This hosts:</p> <ul style="list-style-type: none"> <li>• Materials generated for/at Events 1-3, including videos, slides, supporting materials, event reviews, Tweet collections</li> </ul>

<sup>2</sup> At the time of writing, this is not yet the case.

<p>communications between, and beyond, face-to-face meetings of network members.'</p> <p>(Hall et al, 2018, p. 857-858.)</p>	<ul style="list-style-type: none"> <li>• Profiles of network members, event contributors, funders and sponsors</li> <li>• A skills index of the network membership</li> <li>• An interactive network map</li> </ul>
<p><i>Recommendation: invest in the development of key members</i></p> <p>'it is recommended that networks nurture core members to guarantee their durability... the role of leading work from the nucleus of a single network may be assigned to different sets of users according to different network goals.'</p> <p>(Hall et al, 2018, p. 858)</p>	<p>Some RIVAL members were invited to take on particular roles as:</p> <ul style="list-style-type: none"> <li>• Board members (4)</li> <li>• Leaders for each of the four outputs (4)</li> </ul>
<p><i>Recommendation: allocate resources for beyond the official funding period</i></p> <p>'include provision for continued lightweight investment beyond the formal delivery of organised events... [to] serve as further impetus for network members to maintain their links.'</p> <p>(Hall et al, 2018, p. 857)</p>	<p>Team A secured additional external investment for at least one further RIVAL event after the end of the formal programme.</p>
<p><i>Tip: place a limit on the number of network members</i></p> <p>(Hall et al, 2019, p. 1061)</p>	<p>Network membership was limited to 32.</p>
<p><i>Tip: insist that participants commit to participation in the majority of network events</i></p> <p>(Hall et al, 2019, p. 1062)</p>	<p>Event 1 was open to all as a 'taster', i.e. those who participated at Event 1 were not obliged to sign up for the remainder of the programme, nor was participation at Event 1 a prerequisite of the other three events.</p> <p>Events 2, 3 and 4 were 'sold' as a set, i.e. everyone signed up for all three events as a single commitment.</p>
<p><i>Tip: provide for ad hoc network member presentations at each event</i></p> <p>(Hall et al, 2019, p. 1062)</p>	<p>Events 1-3 all included a half hour slot at which network members could share their news in an informal manner.</p>
<p><i>Tip: offer sessions with broad (as opposed to narrow) appeal</i></p> <p>(Hall et al, 2019, p. 1073)</p>	<p>All those who gave a 'formal' presentation placed more focus on generic issues (e.g. means of translating research into practice, generating impact, influencing policy) than the specifics of the service context of the research</p>

	undertaken (e.g. schools, academic or public libraries).
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Table II: Impact of DREaM model on the implementation decisions for RIVAL

In addition, RIVAL benefitted from the physical proximity of its membership, with the large majority located within the main area of population density of Scotland.

## 4 The empirical study: research design

### 4.1 The SNA and outcomes questionnaires

Two questionnaires were designed for the empirical work. The first required all network members to answer straightforward questions about their professional relationships with one another. This enabled the performance of an SNA. Individuals were asked to select from the following statements to describe their connection with each other member of the network prior to the start of the project, and at the end:

- I had no knowledge of them at all.
- I had heard of them.
- I had knowledge of their professional expertise.
- I had met them professionally (online or face to face).
- I had met them socially (online or face-to-face).
- I felt comfortable approaching them for advice on a relevant professional topic.

In respect of the study's main research question *How transferable are strategies shown to be successful in one model of network development (DREaM) to another (RIVAL)?* the purpose of this exercise was to measure changes in network topology over the period of the network events.

The second questionnaire was built around a series of statements that related to possible outcomes of network membership to assess the extent of network building amongst the members over the course of the project. Completion of this questionnaire was optional. Respondents were invited to give their level of agreement with the statements in Table III by selecting from options: strongly disagree; disagree; neither disagree nor agree; agree; strongly agree; don't know.

<b>Creating new relationships</b>
RIVAL created new relationships between LIS academics and LIS practitioners (e.g. librarians) in Scotland.
RIVAL created new relationships between LIS academics (e.g. lecturers, university researchers and PhD students) in Scottish universities.
RIVAL created new relationships between LIS practitioners (e.g. librarians, independent researchers/consultants, professional body officials) in Scotland.
<b>Strengthening existing relationships</b>
RIVAL strengthened existing relationships between LIS academics and LIS practitioners (e.g. librarians) in Scotland.

RIVAL strengthened existing relationships between LIS academics (e.g. lecturers, university researchers and PhD students) in Scottish universities.
RIVAL strengthened existing relationships between LIS practitioners (e.g. librarians, independent researchers/consultants, professional body officials) in Scotland.
Membership of RIVAL has enhanced my relationship with colleagues who are also RIVAL members.
<b>Sharing contacts</b>
As a result of participation in the RIVAL project, I would feel comfortable asking a RIVAL network member to introduce me to a contact in their wider network.
As a result of participation in the RIVAL project, I would feel comfortable sharing my wider network contacts with other RIVAL network members.
<b>The COVID19 pandemic</b>
The pandemic had a negative effect on the RIVAL network.
<b>Resources created during the funded period</b>
The RIVAL project has produced some useful online resources that can be used by network members and others.
<b>The means of bringing the membership together</b>
The ways in which the RIVAL network has brought researchers and practitioners together could be applied in other areas of research/professional expertise (e.g. nursing, social work, policing).
<b>Meeting the project goal</b>
The RIVAL project has created a collaborative network on Scotland-based LIS researchers and practitioners interested in maximising the impact and value of LIS research.
<b>Research confidence</b>
RIVAL network membership has increased my belief that I can attain my professional goals as a research user (practitioners only).
RIVAL network membership has increased my confidence in other ways (than belief in my ability to obtain my professional goals) as a research user (practitioners only).
RIVAL network membership has increased my belief that I can attain my professional goals as a research partner (practitioners only).
RIVAL network membership has increased my confidence in other ways (than belief in my ability to obtain my professional goals) as a research partner (practitioners only).
<b>Application of new learning</b>
I have been able to integrate learning from the RIVAL network into my service provision work (practitioners only).
I have been able to incorporate research ideas inspired by the needs expressed by the practitioner RIVAL network members into my research plans (researchers only).

*Table III: Statements in the outcomes questionnaire*

There were also opportunities for providing additional information about the statements by typing comments into associated text boxes. At the end of this questionnaire, respondents were asked for final comments on their experience of participating in RIVAL.

The two draft questionnaires were reviewed by Team D members at Event 4 part 2 in February 2021, following a pilot exercise conducted at the end of January 2021. In tandem with questionnaire design, the project team members sought, and were granted, ethical approval from Edinburgh Napier University for this study. The questions were presented in English, as were the responses.

#### 4.2 *Data collection and analysis*

The questionnaires went live on NoviSurvey on 15<sup>th</sup> February 2021, with their availability emailed to network members. By 10<sup>th</sup> March 2021, all members had responded to the SNA questionnaire. By that date there were also 23 usable responses to the outcomes questionnaire, completed by 4 academics, 4 academic librarians, 7 public/school librarians, and 8 others (e.g. professional body staff, national or other special library staff, independent researcher). Due to the need to complete the empirical work by the end of project's funded period on 31<sup>st</sup> March 2021, both questionnaires were closed at this point to allow for data analysis. The 78% response rate for the outcomes questionnaire is acknowledged as a limitation of the study.

In accordance with ethics and data management requirements, the raw data were available to the project team members only, and the downloaded data held on a drive that was accessible to only one of them. In the SNA data all participants' names were replaced with pseudonyms. These data were analysed using UCINET version 6. The quantitative data from the outcomes questionnaire were analysed using Excel, and the qualitative data were analysed manually.

## 5 **Results**

### 5.1 *The creation of a network*

A clear majority of the 23 outcomes questionnaire respondents agreed (13) or strongly agreed (9) that the project met its primary aim of creating a network of LIS practitioners and researchers. The remaining respondent did not know whether this aim was achieved. It is possible that this respondent shared the view expressed in three comments associated with the statement on network creation: that a network had been established, but this was just a start. One said:

I suspect that for some participants engagement in the RIVAL sessions is quite wide but not that deep. So, the network has been useful for lesson learning, building contacts and knowledge across research and evaluation themes but [after only a few sessions including online] it will not have impacted on behaviour to a major extent.

Comments provided elsewhere, notably in response to a final question that asked respondents to comment on their experience of participation in the network, add flavour to the general finding that a network was established. These include reference to the development of *existing* connections; creation of *sectoral sub-networks* to discuss specific work challenges; and the value of participation in a Scotland-wide initiative. In particular, the diversity of the network was appreciated, in terms of the profile of network members, and research topics covered in the formal and informal sessions at the RIVAL events. For example:

For me it was really positive to see so many sectors and roles represented within the network and I am hopeful this has also been a positive aspect of the RIVAL experience for others.

The mode of project delivery was noted as conducive to network development. One respondent said that 'having an opportunity to connect with professionals and researchers in a sustained, repeating way, was very valuable to developing lasting relationships'. Another referred to RIVAL as a 'nurturing, friendly forum which encourages open discourse and collaboration'. The set-up of RIVAL, drawing on the practice of DREaM, encouraged people to participate more than they do usually at more traditional networking events. One respondent admitted:

On a personal level, the RIVAL has helped me to engage more at networking events. I have always found it difficult to approach people I have never met before and start conversation; I'm that person who stands at the side hoping someone will come over and talk to them. RIVAL events made engaging others in conversation much easier for me as it was very interactive in its approach to discussion and never felt overly formal.

The results from the SNA questionnaire confirmed that the existing proportion of all possible connections amongst the network members significantly increased over the course of the RIVAL project. This strengthening of network density – from 38% of all possible network connections existing at the start to 90% at the end – serves as a straightforward means of demonstrating the change in network topology. The increase in network density is illustrated in Figures I and II below. Here each node represents a network member, and the lines the ties between them, with the arrowheads indicating members' claims of ties. For example, in Figure 1, Petra stated that she had a tie with Janet, but Janet did not state that she had a tie with Petra. Practitioners are shown as circles, with academics (lecturers, researchers and PhD students) represented as triangles.

Changes in network centrality, i.e. the proximity of members to others in the network, and the extent to which they lie on the shortest path between others (Cooke & Hall, 2013, p. 792), are also evident when a comparison is made between Figures I and II. In the first, a few members<sup>3</sup> are obviously the most central in the network and thus hold the strongest positions to influence communications. This is no longer the case in the second.

We did not question the network members about the intensity of their relationships with one another. For this reason, all lines between nodes in the sociograms are the same weight.

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<sup>3</sup> When the pseudonyms are matched to identities, the most central individuals at the start are revealed as members of the NetworkX project board and/or individuals who hold visible, senior professional roles.



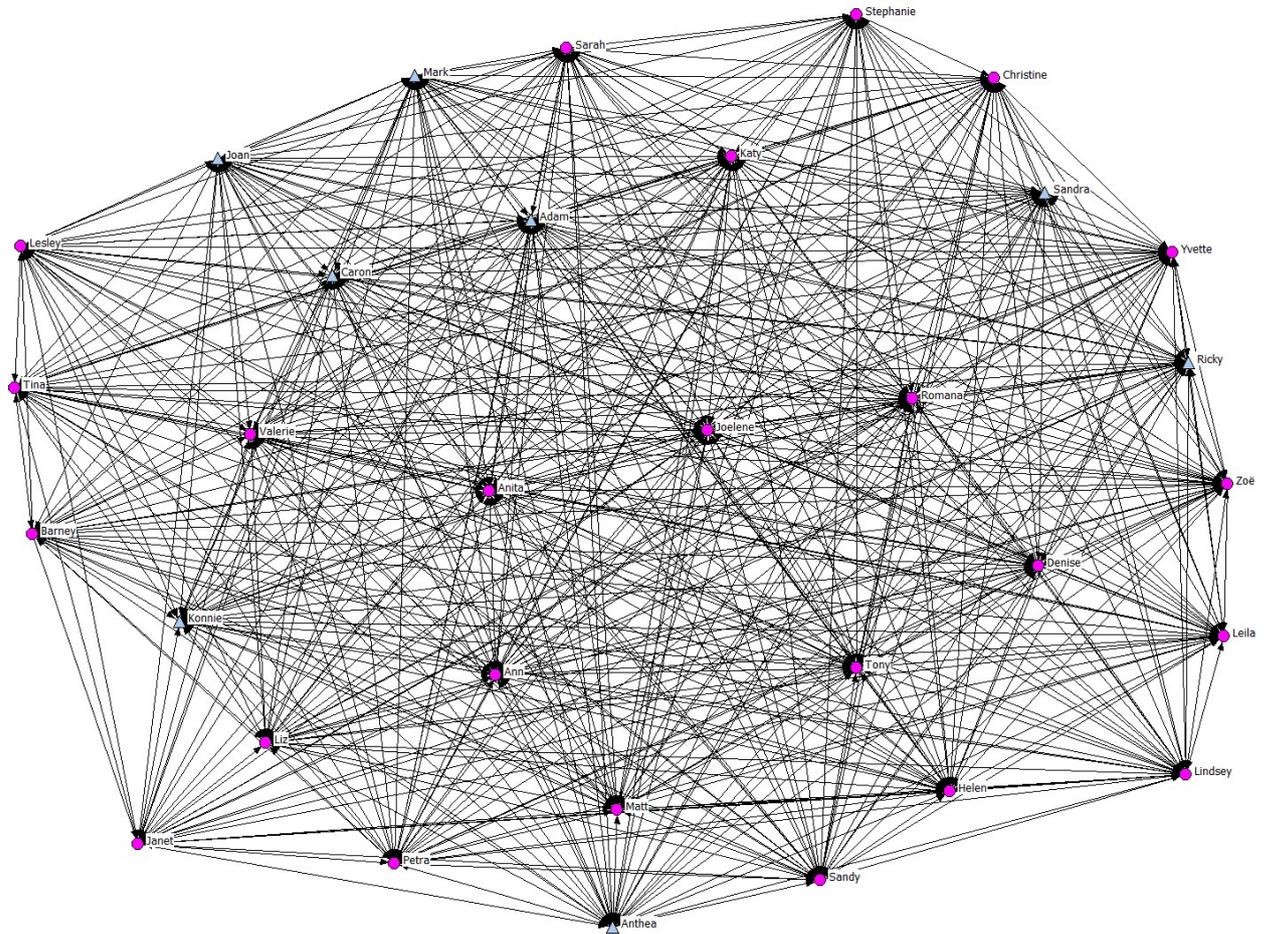
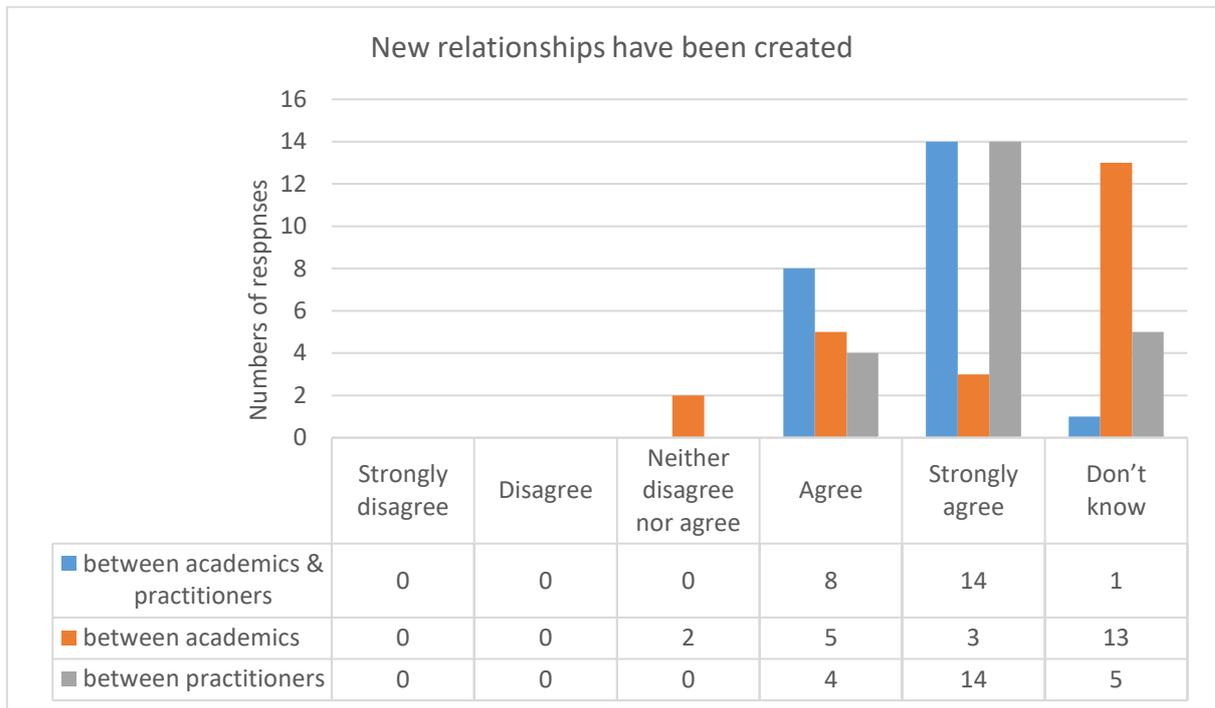


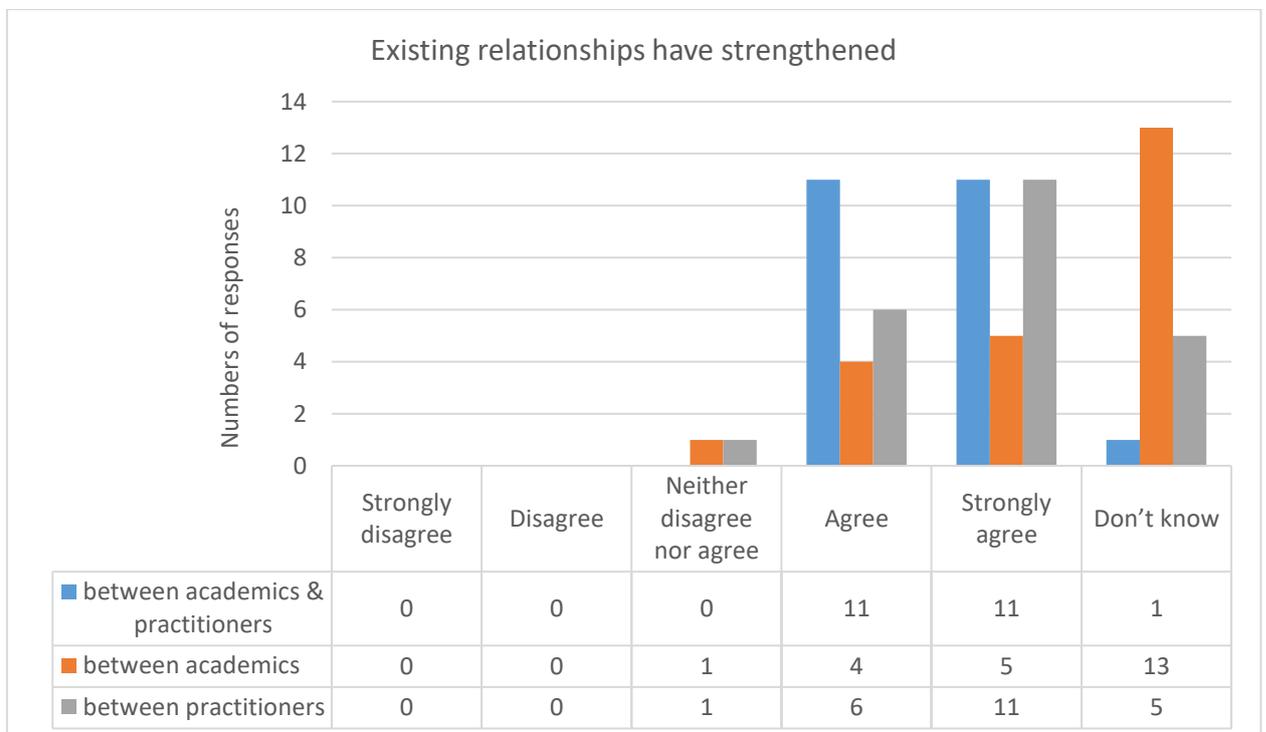
Figure II: Network ties at the end of the RIVAL project (all names in the figure are pseudonyms)

## 5.2 Development of relationships between network members

Some statements in the outcomes questionnaire were designed to assess opinion on the creation of new relationships, and strengthening of existing relationships, between and within the two main cohorts of network members. The responses are summarised in Figures III and IV.



*Figure III: Creation of new relationships*



*Figure IV: Strengthening of existing relationships*

These data indicate that members mostly believed that new relationships had been created, and existing relationships strengthened, between practitioners and academics, and amongst practitioners. However, there is a lack of knowledge as to whether new relationships were created

and/or pre-existing relationships strengthened, amongst academics. This is probably because most respondents to the questionnaire (19) were practitioners who had not observed the interactions between the academics sufficiently to make a judgement on this. This also explains the high number of 'Don't know' responses: they result from asking network members from one community to make a judgement on the other, many of whom were reluctant to do so. However, the academics themselves exhibited enthusiasm for mixing with peers from other institutions, as illustrated in this response to the final question:

Getting to meet/understand Scotland's LIS research community [has been] very useful.

Twelve respondents identified that there was at least one other network member from their employing organisation. The majority of these (10) agreed (5 strongly) that membership of RIVAL enhanced their relationship(s) with these colleagues. Of the other two, one disagreed, and the other selected the neutral response. The benefit of RIVAL to intra-organisational networking away from usual workplaces were illustrated in comments such as:

This was a really good opportunity to see colleagues outside of our normal professional environments, as it gave me a real insight into their broader expertise and contributions to the LIS sector.

In recognition that networks are not static, two statements were presented to the network members on the sharing of contacts: (1) 'As a result of participation in the RIVAL project, I would feel comfortable asking a RIVAL network member to introduce me to a contact in their wider network'; (2) 'As a result of participation in the RIVAL project, I would feel comfortable sharing my wider network contacts with other RIVAL network members.' In both cases, the majority of the 23 respondents selected the 'strongly agree' option for these statements, 12 for the first question and 14 for the second. A couple of provisos were included about such sharing: that with whom contacts would be shared depended on the levels of interactions enjoyed at the RIVAL events; that contacts would only be shared with the permission of the person/people external to the RIVAL network.

### 5.3 *Practitioner participants as research users and partners*

Some statements in the outcomes questionnaire were designed specifically for the practitioner members. From the responses to these, it is possible to gauge the extent to which they believed that their confidence and self-efficacy as research users and partners grew over the course of the RIVAL project. The responses from the 19 practitioners who participated in this element of the research were largely positive. Majorities of:

- 17 agreed (4 strongly) that their beliefs in attaining their professional goals as *research users* had increased (2 did not know)
- 16 agreed (3 strongly) that their beliefs in attaining their professional goals as *research partners* had increased, (2 did not know, and 1 selected the neutral response)
- 13 agreed (5 strongly) that their confidence had increased in other ways as *research users* (2 did not know, and 4 chose the neutral response)
- 11 agreed (2 strongly) that their confidence had increased in other ways as *research partners* (2 did not know, and 6 chose the neutral response).

One respondent drew attention to the supportive environment created in the RIVAL network:

The group exercise in the later online sessions were good for my confidence. I can be a bit nervous about speaking up in new groups, but I found my ideas and contributions were well received and the lead in the group encouraged people to contribute.

Furthermore, in response to the final open question on the outcomes questionnaire, one practitioner noted that 'Participation has encouraged me to pursue a research journey as a practitioner'. This indicates a commitment to take research engagement beyond that of user/partner to practitioner-researcher.

#### 5.4 *Learning to enhance research into practice and practice into research*

##### 5.4.1 New learning

The outcomes questionnaire did not include a specific question on learning. However, from comments responding to other questions, it is evident that members learned from their participation in the programme. This is most obvious with respect to practitioners' appreciation of LIS environment. For example:

RIVAL widened my knowledge of what is available and being researched in the world of libraries.

Three specific themes related to learning about research in general were highlighted by respondents, namely the measurement of research impact, processes associated with execution of academic research, and the communication of research results:

I'm new to the field in the professional sense, and while I've attended research impact valuation events before, this is the first time I feel confident in understanding its foundations.

I have increased my knowledge and understanding of the requirements for academic research and how they may differ from requirements of colleagues working in service provision. This has given me a greater understanding of the constraints funding puts on project development or research.

The RIVAL project highlighted some interesting ways to communicate research.... Leo Appleton is a good example of a researcher who has used online resources and papers to tell us about his focus groups with real enthusiasm. So I can learn from tools and techniques used to present findings, and highlight gaps in the evidence.

The new learning prompted by RIVAL was not limited to the project themes. For example, one respondent said:

RIVAL definitely increased my knowledge and highlighted the importance of the role of people, information and technology in LIS Learning.

Another drew attention to the value of RIVAL to their general professional development:

Engagement with the RIVAL project has helped me develop my skill set both on a personal and professional level.

The keynote speaker at Event 3 appears to have made the greatest impression on the network members who completed the questionnaire. This is perhaps because he was a practitioner-researcher until joining the University of Sheffield as an academic member of staff in 2020. Comments on his contribution included:

I especially recall the takeaway message from Leo Appleton's research, which helped me recognise the role of my work and the importance of my work. From the minute a customer enters the library, other people (me) and their attitudes have an impact. That the library is a safe non-judging environment is welcoming and inclusive for all, no matter who. It shouted out how much libraries nurture well-being during crises or not.

#### 5.4.2 [Open access online resources](#)

All 23 respondents to the outcomes questionnaire were asked for their level of agreement with the statement that 'the RIVAL project has produced some useful online resources that can be used by network members and others'. The majority (20) agreed (8 strongly) that this was the case. Of the other three, two chose the neutral response, and the third stated that they did not know whether this was the case.

Twelve respondents commented on the resources. The directory of members' skills and interests received particular endorsement. For example, a respondent noted:

All [the resources] are useful, [and the] directory of members' skills and interests in particular. This will be my 'go to' resource in future when identifying potential collaborators, or to seek advice – and I would hope other members will feel comfortable to use it and contact me likewise.

Respondents also pointed out the value of the resources to others beyond the network, and showed appreciation of the pre-recorded presentations for Event 3.

#### 5.4.3 [Practitioners' integration of learning from RIVAL into service provision](#)

The 19 practitioner respondents to the outcomes questionnaire were asked about the integration of their learning from the project into their service-provision. A majority of 14 (4 strongly) indicated that they agreed that they had achieved this. Most of the remainder (4) were neutral in their responses, and one did not know. Three respondents commented on this question. Two who selected the neutral answer noted that they hoped to apply their new learning in their work in the future. The third comment on this issue showed an element of frustration with attitudes at their organisation:

Responses to the topic of research were mixed, with some staff inspired by research findings. In contrast to this, I observed feelings of passiveness towards any agenda for change.

The responses to the final question also provide evidence of the application of new learning in service-provision. For example:

RIVAL has provided me with access to a range of researchers and practitioners. [This allows] me the opportunity to learn and discuss different approaches to data collection/use, and how research can be used to support service development ideas, identify aims/outcomes and challenge assumptions, including my own.

A further response drew attention to the impact of the pandemic on limiting opportunities.

[If not for] the pandemic I would have had more success in implementing research into my own practice, but I have hope that this will be easier in future beyond the pandemic.

#### 5.4.4 [Incorporation of research ideas into the plans of LIS researchers](#)

The four academics who answered the outcomes questionnaire agreed with statement 'I have been able to incorporate research ideas inspired by the needs expressed by the practitioner RIVAL network members into my research plans' (2 agree, 2 strongly agree). Two comments made in response to the final question add to this finding. The first indicates that RIVAL widened the horizons of the academics:

A real positive impact of RIVAL for me was the way that it reminded me of the breadth of the LIS sector in Scotland, both in terms of sectoral reach and expertise. This was a really helpful aspect that I hadn't expected, and a real added bonus on top of the opportunity to be part of the network and make new contacts.

The second shows that the path for practitioners to communicate their research needs to researchers has been widened through the project:

The network has increased my awareness of how to raise practitioner issues with the research community, in order to consider whether research exists or could be undertaken in support of those issues.

#### 5.5 [A model of network development for other researcher-practitioner communities](#)

In recognition that LIS is not the only domain that experiences a research-practice gap, network members were asked to respond to a statement that inferred that the ways in which RIVAL brought researchers and practitioners together could be applied in other areas of research/professional expertise (e.g. nursing, social work, policing). There was broad agreement that this was the case (13 strongly agree, 7 agree). The other three responses were neutral (1), and don't know (2).

Two respondents also commented on this theme. The first said that 'there must be lots of lessons that would apply to other areas of expertise/professions e.g. how to attract a diverse group of people to the network in the first place and maintain motivation and commitment to keep them in it'. They also referred to expertise within the project team to attract the funding to set up the network, highlighting that it would be worthwhile for other professional groups to learn from the project's Principal Investigator. The other comment referred to another project on strengthening the links between public libraries, social work, and health care practitioners that could benefit from the expertise evident in RIVAL.

#### 5.6 [The impact of the COVID19 pandemic on RIVAL](#)

The question that generated the most comments from the 23 outcomes questionnaire respondents sought opinion on whether the COVID19 pandemic had a negative effect on RIVAL. The majority (13) thought so (12 agree, 1 strongly agree). However, 5 thought not. The remaining 5 selected the neutral response. The following comment typifies comments on the challenges of running network events online:

The two in-person events provided much greater opportunities to get to know people, chat, informally and formally network, and keep names and faces in mind. Whilst the online meetings enabled it to carry on, it was less of a 'network' and more of a seminar. This is especially so when not all cameras are turned on or visible.

However, most network members who left comments on this topic felt that the project team made the best of the difficult circumstances. For example, one respondent noted:

'From a network model to a model network: strategies for network development to narrow the LIS research-practice gap' by Hazel Hall, Bruce Ryan, Rachel Salzano and Katherine Stephen, accepted for publication by the *Journal of Documentation*, 27/09/22

RIVAL has adapted to [the pandemic] through Teams - perhaps not ideal but we have learned from this that a great of interaction is possible through this (and no travel required!)

Another comment shows that pandemic restrictions serve as a reminder of the value of face-to-face networking:

It is a real shame that the network was forced to take a hiatus, and that we weren't able to have further face to face meeting. In general the pandemic has really reinforced to me how important in-person meetings can be, and inevitably their lack had an impact. However, I have absolutely no criticisms about how [the RIVAL team] managed the [later] events, which I thought were fantastic in the circumstances!

While most of these comments on the pandemic related directly to RIVAL's delivery, a couple of respondents remarked on the likely impacts on RIVAL meeting its goals, for example, because lockdown restrictions made it difficult to apply learning from RIVAL in the workplace (see above), and to work with others:

I think there is considerable potential for practitioners and researchers to work more collaboratively, but with the added problems that COVID has created, I feel that it may take more time to see this in action.

### 5.7 *Longer term outcomes of RIVAL*

The longer-term ambitions for the network noted in the funding bid included improvements in LIS services delivery that could be traced back to the network, and on-going collaborations between LIS practitioners and researchers. While there was no evidence from the questionnaire responses that participation in the network had yet had an impact on the delivery of library and information services in Scotland, a number of collaborations between the practitioner and researcher members of the network were initiated over the course of the project, some of which have already borne fruit.

The most obvious collaborations are those around the four project outputs, the first two of which are complete: Team B's journal article (Castle et al, 2021) and Team D's evaluation report. Responses to the outcomes questionnaire showed a strong appetite for participation in Team A's event to take place following the lifting of all pandemic restrictions. In response to the final open question, for example, one network member said 'Hope to meet everyone in person again at [the next event] - if it is possible!', with another referring to the planned event as a means to reinforce network relationships. Similarly, there were two comments – presumably from Team C members – that indicated enthusiasm for the on-going work on the funding bid.

In addition to these collaborations, independent of the RIVAL programme of events, four RIVAL members – one practitioner and three academics from two institutions – developed and submitted a major funding bid in 2020. This was highlighted by one of the outcomes questionnaire respondents when they noted: 'A team of RIVAL network members ... formed to submit an AHRC grant proposal. This would never have happened without RIVAL.'

Further outputs of the project include two presentations by the Edinburgh Napier University team, both delivered at practitioner events in 2021. The first (Ryan, 2021) focused on the building of RIVAL and then adapting it for enforced online delivery, including the vital extra work to guarantee a suitable technical set-up for everyone to participate, and efforts to maintain high levels of engagement amongst the network members to the end of the project, even though they could only see one another online. The extension to the project period granted by the funders allowed the

project team to learn from experience of other online events after March 2020, then apply this in their own planning, rather than rush into online delivery unprepared. In the second output (Hall, 2021) the case was made that even during a pandemic, LIS practitioners and researchers are keen to come together to network.

## 6 Discussion

Amongst others, Ardanuy and Urbano (2017) have called for LIS practitioners and researchers to interact 'for the progress of an academic branch of knowledge and for the consolidation of professional practice' (pp. 317-318). Furthermore, Nguyen and Hider (2018) believe that these interactions should be led by researchers: 'LIS schools and academics should be active players across the research community, creating connections and developing strong relationships with industry. They should aim to build strong partnerships with libraries and librarians, for the benefit not only of their own research, but also so that they can increase the capacity of practitioner researchers at large' (p. 16). Staff at Edinburgh Napier University responded to these calls when they won grant funding to develop RIVAL.

On the basis of the evaluation of the data discussed above, it can be seen that RIVAL has served as a valuable site for interaction for Scotland-based LIS practitioners and researchers, allowing for the strengthening of both understanding and relationships between the two communities, and offering opportunities for the development of new knowledge and services. The network members learnt from one another during the funded period of RIVAL, and have been able to apply their new knowledge in practice. They collaborated on four RIVAL outputs, and other pieces of work, notably a major grant proposal that was submitted at the mid-point of the project. At the time of writing, the generation of another proposal is also in progress. While, to date, more tangible impact from RIVAL has been felt in terms of research than it has in service provision, the practitioner network members reported improvements in their self-efficacy and confidence as research users and partners. This bodes well for their bringing research into their practice in the future, and meets calls for research to be 'promoted as a valuable activity for all library professionals' (Partridge et al, 2014, p. 36).

These valuable outcomes confirm the main message in the extant literature that dedicated LIS practitioner networks focused on research, and networks with broader remit that encompass research – whether in-person, online, or hybrid – generate value for LIS practitioners, especially in terms of collaborative research productivity that encourage 'bouncing ideas off others' (Crampsie, et al, 2020 p. 259). Elements of the project echo some of the findings of evaluations of prior work to bring LIS practitioners and researchers together, such as the mentoring between academics and librarians discussed by Detlor and Lewis (2015), and Pickton (2016). A further benefit of the implementation here, however, is that individuals from more than one institution can take advantage of peer support in this network environment. In addition, there are strong indications here that the value of RIVAL is not limited to the membership. This is evident, for example, in the willingness of members to share their contacts beyond one another (over and above the open access nature of the resources created over the course of the funded period).

The analysis presented here validates the approach established in the DREaM project for network building. For example, securing the commitment of those interested in membership to participate in a succession of scheduled events (Cooke and Hall, 2013, p. 788; Hall et al, 2018, p. 857) was important to both expectations and outcomes of relationship building in RIVAL. The approach was successfully extended into the virtual environment, and supported by additional online resources: a

skills directory, a member directory, and a member map. Network members' appreciation of these artefacts strengthened the network further, broadening ambient or peripheral awareness of people and skills (as noted in Buunk, Hall and Smith, 2017). They should be of value in the future because they remove one of the hurdles of practitioner research engagement, i.e. the difficulty of identification of potential external research partners (an issue noted in Given et al, 2022, p. 6). A further feature, distinguishing RIVAL from DREaM, is the emphasis on 'research into practice'. That the most popular speaker across the whole programme was Dr Leo Appleton - a practitioner recently turned academic - is telling. The model of network development that was initiated in the DREaM project and then extended in RIVAL should be applicable in other domains that experience a research-practice gap. The success of future network building initiatives may be evaluated using the criteria identified in this paper, such as their impact on practitioner use of research, and on practitioner research per se.

Considering prior work on physical proximity as a predictive factor of enduring network relationships (Hall et al, 2019, p. 856), it is likely that the relationships established in RIVAL, which was Scotland-wide, will have better chances of survival than that of other similar initiatives, which invite participation from a much larger population spread across a greater geographic area. In addition, commitment from stakeholders 'to supporting and promoting common ground for practitioners and academics' (Ardanuy and Urbano 2017, p. 327), preferably with 'lightweight investment in networks beyond the formal delivery of organised events' (Hall et al, 2018, p. 857), will help RIVAL endure. The promise of the (fifth) event organised by Team A to be hosted by a network member's organisation is indicative of the appetite to build on RIVAL's foundations to continue to deliver value beyond the funded period.

While the COVID19 pandemic necessitated a delay to the delivery of the programme of RIVAL events, and the conversion of Events 3 and 4 to online meetings, its impact was not as severe as had been feared. Indeed, the removal of the need to travel to events was seen as a positive by some network members, and the budget saved on paying fares and accommodation costs for those from more remote locations covered the higher staffing costs associated with the extensive preparation time required to run successful virtual events. The challenges presented by the pandemic encouraged the project team to pay careful attention to maintain the welcoming spirit established in Events 1 and 2 in the online environment set up for Events 3 and 4. Their success in overcoming these adds to the model of funded network development that could be shared with other groups.

This analysis thus strengthens the argument for following the recommendations from the DREaM model when setting up a collaborative network designed to narrow the research-practice gap in LIS:

- *Network events*: allocate time for social interaction, and ad hoc member presentations; offer sessions with broad appeal
- *Network members*: limit membership size; insist that membership requires participation at most events; invest in key members
- *Network infrastructure*: use social media; source resources for activities beyond the funded period

## 7 Conclusion

In contrast with much of the literature on the research-practice gap, which tends to privilege investigations into the research productivity of academic librarians based in single institutions in North America with an eye on career advancement, here the broader theme of collaborative research engagement of LIS practitioners from a range of sectors with LIS researchers across several institutions in a European country has been considered. The findings from the evaluation of RIVAL confirm the value of the model of network development deployed in the DREaM project (Cooke and Hall, 2013; Hall et al, 2018 & 2019). In addition, demonstration that the DREaM model is sufficiently resilient to be modified successfully for online delivery adds to this earlier work.

The detail of this evaluation extends beyond a simple description of the characteristics of an initiative to narrow the research-practice gap and presentation of network topology. Rather, it validates ways of designing and implementing professional networks to heighten the possibility of long-term research collaborations between LIS practitioner and researcher communities within a geographic region. In addition, it applies criteria for their evaluation. Here two gaps are narrowed: between research and practice, and between researchers and practitioners.

These findings can give confidence to funding bodies that networking grants are worth the investment to provide an interface at which practitioner and researcher communities may meet and sow the seeds of productive research partnerships. This is important at a time when there is 'greater pressure for practitioners to be involved in research and in using research results and insight, and for academics and other researchers to pay greater attention to the dissemination of results in a way useful for practice' (Bawden and Robinson, 2022, p. 329). To establish whether or not the seeds planted at RIVAL actually grow and flourish as discernible impact will be assessed in the future, drawing on the impact evaluation technique presented in Hall et al (2019).

Also in future research it would be worthwhile to consider the question of the research-practice/researcher-practitioner gap with reference to wider extant knowledge on the sociology of the professions and academia, and/or more specific literature on networking practices at conferences within established working groups in professional and scientific associations and bodies. An analysis of the findings presented here with studies of a similar nature in domains beyond LIS would also serve to further evaluate the model of network development implemented in the DREaM and RIVAL projects.

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## 9 References

Alam, A., Khusro, S., Ullah, I. Babb Karim, M.S. (2017). Confluence of social network, social question and answering community, and user reputation model for information seeking and experts generation. *Journal of Information Science* 43(2), 260-274.  
<https://doi.org/10.1177/0165551516637322>

'From a network model to a model network: strategies for network development to narrow the LIS research-practice gap' by Hazel Hall, Bruce Ryan, Rachel Salzano and Katherine Stephen, accepted for publication by the *Journal of Documentation*, 27/09/22

Ardanuy, J. & Urbano, C. (2017). The academic-practitioners gap in Spanish library and information science: an analysis of authorship and collaboration in two leading national publications. *Journal of Librarianship and Information Science* 51(2), 317-330. <https://doi.org/10.1177/0961000617726125>

Aytac, S. & Slutsky, B. (2014). Published librarian research, 2008 through 2012: analyses and perspectives. *Collaborative Librarianship* 6(4), 147-159. Available: <https://digitalcommons.du.edu/cgi/viewcontent.cgi?article=1085&context=collaborativelibrarianship> [Accessed 22 September 2022]

Babb, M. (2019). A survey exploring the perceptions of academic librarians as researchers. *Canadian Journal of Academic Librarianship* 5, 1-17. <https://doi.org/10.33137/cjal-rcbu.v5.29919>

Babb, M. (2021). Faculty and librarian perceptions of librarians as researchers: results from semi-structured interviews. *Canadian Journal of Academic Librarianship*, 7, 1-19. <https://doi.org/10.33137/cjalrcbu.v7.36874>

Bawden, D. & Robinson, L. (2022). *Introduction to information science* (2<sup>nd</sup> ed). Facet: London.

Booth, A. (2011). Barriers and facilitators to evidence-based library and information practice: an international perspective. *Perspectives in International Librarianship* 1. <https://doi.org/10.5339/pil.2011.1>

Borrego, A., Ardanuy, J. & Urbano, C. (2018). Librarians as research partners: their contributions to the scholarly endeavour beyond library and information science. *Journal of Academic Librarianship* 44, 663-670. <https://doi.org/10.1016/j.acalib.2018.07.012>

Buunk, I., Hall, H. & Smith, C.F. (2017). Skills in sight: how social media affordances increase network awareness. *Proceedings of the 18th European Conference on Knowledge Management*, Academic Conferences Ltd, Reading, pp. 181-186. Available: <https://www.napier.ac.uk/~media/worktribe/output-957705/skills-in-sight-how-social-media-affordances-increase-network-awareness.pdf> [Accessed 22 September 2022]

Campbell, K., Ellis, M., & Adebajo, L. (2012). Developing a writing group for librarians: the benefits of successful collaboration. *Library Management* 33(1/2), 14-21. <https://doi.org/10.1108/01435121211203284>

Carson, P., Colosimo, A.L., Lake, M. & McMillan, B (2014). A 'partnership' for the professional development of librarian researchers. *Partnership: the Canadian Journal of Library and Information Practice and Research*, 9(2). <https://doi.org/10.21083/partnership.v9i2.3037>

Castle, J., Hall, H., Lockerbie, H., Mackintosh, J., McCormick, K., McNamara, S., Prince, E. & Robertson, L. (2021). Research, impact, value and the library and information sector in Scotland. *Information Professional* March, 30-33.

Chang, Y-W. (2016). Characteristics of articles co-authored by researchers and practitioners in library and information science journals. *Journal of Academic Librarianship* 42(5), 535-541. <https://doi.org/10.1016/j.acalib.2016.06.021>

Cirasella, J. & Smale, M.A. (2011). Peers don't let peers perish: encouraging research and scholarship among junior library faculty. *Collaborative Librarianship* 3(2), 98-109. <https://doi.org/10.29087/2011.3.2.07>

'From a network model to a model network: strategies for network development to narrow the LIS research-practice gap' by Hazel Hall, Bruce Ryan, Rachel Salzano and Katherine Stephen, accepted for publication by the *Journal of Documentation*, 27/09/22

- Clapton, J. (2010). Library and information science practitioners writing for publication: motivations, barriers and supports. *Library and Information Research* 34(106), 7-21.  
<https://doi.org/10.29173/lirg217>
- Cooke, L. & Hall, H. (2013). Facets of DREaM: a Social Network Analysis exploring network development in the UK LIS research community. *Journal of Documentation*, 69(6), 786-806.  
<https://doi.org/10.1108/JD-09-2012-0124>
- Crampsie, C., Neville, T. & Henry, D. (2020). Academic librarian publishing productivity: an analysis of skills and behaviors leading to success. *College and Research Libraries* 81(2), 248-271.  
<https://doi.org/10.5860/crl.81.2.248>
- Detlor, B. & Lewis, V. (2015). Promoting academic library research through the 'Faculty-member-in-residence' program. *Journal of Academic Librarianship* 41, 9-13.  
<https://doi.org/10.1016/j.acalib.2014.11.011>
- Eve, J. & Schenk (2006). Research and practice: findings from the Interactions project. *Library and Information Research* 30(96), 36-46. Available:  
[https://cris.brighton.ac.uk/ws/portalfiles/portal/182120/LIR\\_paper.pdf](https://cris.brighton.ac.uk/ws/portalfiles/portal/182120/LIR_paper.pdf) [Accessed 22 September 2022]
- Exner, N & Houk, A.H. (2010). Starting the write way: comparing two library scholarship development programs. *Library and Leadership Management* 24(4), 178-182. Available:  
[https://libres.uncg.edu/ir/uncg/f/A\\_Harris\\_Houk\\_Starting\\_2010.pdf](https://libres.uncg.edu/ir/uncg/f/A_Harris_Houk_Starting_2010.pdf) [Accessed 22 September 2022]
- Fallon, H. (2012). Using a blended group learning approach to increase librarians' motivation and skills to publish. *Review of Academic Librarianship* 18(1), 7-25.  
<https://doi.org/10.1080/13614533.2012.654673>
- Fennewald, J. (2008). Research productivity among librarians: factors leading to publications at Penn State. *College and Research Libraries* 69(2), 104-116. <https://doi.org/10.5860/crl.69.2.104>
- Fiawotoafor, T., Dadzie, P.S. & Adams, M. (2019). Publication output of professional librarians in public universities in Ghana. *Library Philosophy and Practice*, January, 1-40. Available:  
<https://digitalcommons.unl.edu/libphilprac/2303/> [Accessed 22 September 2022]
- Finlay, S.C., Ni, C., Tsou, A. & Sugimoto, C.R. (2013). Publish or practice? An examination of librarian's contributions to research. *portal: Libraries and the Academy* 13(4), 403-421.  
<https://doi.org/10.1353/pla.2013.0038>
- Fitzgibbons, M., Kloda, L. & Miller-Nesbitt, A. (2017). Exploring the value of academic librarians' participation in journal clubs. *College and Research Libraries* 78(6), 774-788.  
<https://doi.org/10.5860/crl.78.6.774>
- Galbraith, Q., Smart, E., Smith, S.D. & Reed, M. (2014). Who publishes in top-tier library science journals? An analysis by faculty status and tenure. *College and Research Libraries* 75(5), 724-735.  
<https://doi.org/doi:10.5860/crl.75.5.724>
- Given, L., Partridge, H. & Howard, K. (2022). Supporting collaborative research in information science: The RADAR program as a model for academic-practitioner team engagement. *Library and Information Science Research* 44(2), 101152, 1-9. <https://doi.org/10.1016/j.lisr.2022.101152>

'From a network model to a model network: strategies for network development to narrow the LIS research-practice gap' by Hazel Hall, Bruce Ryan, Rachel Salzano and Katherine Stephen, accepted for publication by the *Journal of Documentation*, 27/09/22

Goodsett, M. & Walsh, A. (2015). Building a strong foundation: mentoring programs for novice tenure-track librarians in academic libraries. *College and Research Libraries* 76(7), 914-933. <https://doi.org/10.5860/crl.76.7.914>

Haddow, G. & Klobas, J.E. (2004). Communication of research to practice: closing the gap. *Library and Information Science Research* 26(1), 29-43. <https://doi.org/10.1016/j.lisr.2003.11.010>

Hall, H. (2010). Promoting the priorities of practitioner research engagement. *Journal of Librarianship and Information Science*, 42(2), 83-88. <https://doi.org/10.1177/0961000610363978>

Hall, H. (2018). Research Impact Value and LIS RIVAL: resources and review. Available from: [https://hazelhall.org/2018/07/25/research-impact-value-and-lis-lis\\_rival-resources-and-review/](https://hazelhall.org/2018/07/25/research-impact-value-and-lis-lis_rival-resources-and-review/) [Accessed 22 September 2022]

Hall, H. (2021). Connecting, collaborating, creating, and COVID19: building a network of library and information science researchers and practitioners during a pandemic. Paper presented at the *Scottish Confederation of University and Research Libraries (SCURL) Conference 2021*, 9th June 2021. Slides available from <https://www.slideshare.net/HazelHall/connecting-collaborating-creating-and-covid19-building-a-network-of-library-and-information-science-researchers-and-practitioners-during-a-pandemic> [Accessed 22 September 2022]

Hall, H., Cruickshank, P. & Ryan, B. (2018). Long-term community development within a researcher network: a social network analysis of the DREaM project cadre. *Journal of Documentation*, 74(4), 844-861. <https://doi.org/10.1108/JD-05-2017-0069>

Hall, H., Cruickshank, P. & Ryan, B. (2019). Closing the researcher-practitioner gap: an exploration of the impact of an AHRC networking grant. *Journal of Documentation* 75(5), 1056-1081. <https://doi.org/10.1108/JD-12-2018-0212>

Hall, H., Irving, C. & Cruickshank, P. (2012). Improving access to library and information science research: maximising its relevance and impact to practitioners. *Business Information Review* 29(4), 224-230. <https://doi.org/10.1177/0266382112470413>

Hall, H. & Ryan, B. (2019). Research Impact and Value in LIS: poster presented at *Edge 2019*. Slide available from <https://www.slideshare.net/HazelHall/research-impact-and-value-in-lis-poster-presented-at-edge-2019> [Accessed 22 September 2022]

Hall, L.W. (2018). From practice to research at Flinders University Library: sustaining a research culture. *Library Management* 39(8/9), 615-624. <https://doi.org/10.1108/lm-10-2017-0110>

Hall, L.W. & McBain, I. (2014). Practitioner research in an academic library: evaluating the impact of a support group. *Australian Library Journal* 63(2), 129-143. <https://doi.org/10.1080/00049670.2014.898238>

Heinbach, C., Powell, C., Fargo, H. & Bhat, N. (2019). The librarian parlor: demystifying the research process through community. In: *Recasting the narrative: Proceedings of the ACRL 2019 Conference*, Cleveland, Ohio, April 10-13 2019. Available: <https://www.ala.org/acrl/sites/ala.org.acrl/files/content/conferences/confsandpreconfs/2019/TheLibrarianParlor.pdf> [Accessed 22 September 2022]

'From a network model to a model network: strategies for network development to narrow the LIS research-practice gap' by Hazel Hall, Bruce Ryan, Rachel Salzano and Katherine Stephen, accepted for publication by the *Journal of Documentation*, 27/09/22

Hoffman, K., Berg, S. & Koufogiannakis, D. (2017). Understanding factors that encourage research productivity for academic librarians. *Evidence Based Library and Information Practice* 12(4), 102-129. <https://doi.org/10.18438/B8G66F>

Horowitz, L.R. & Martin, J. (2013). The librarian as practitioner/researcher: a discussion. *Evidence Based Library and Information Practice* 8(3), 79-82. <https://doi.org/10.18438/B8HG7W>

Jacobs, H.L.M. & Berg, S.A. (2013). By librarians, for librarians: building a strengths-based institute to develop librarian's research culture in Canadian academic libraries. *Journal of Academic Librarianship* 39(3), 227-231. <https://doi.org/10.1016/j.acalib.2013.02.003>

Joint, N. 2005. Promoting practitioner-researcher collaboration in library and information science *Library Review* 54(5), pp. 289-294. <https://doi.org/10.1108/00242530510600534>

Kennedy, M.R. & Brancolini (2012). Academic librarian research: a survey of attitudes, involvement and key capabilities. *College and Research Libraries*, 73(5), 431-448. <https://doi.org/10.5860/crl-276>

Kennedy, M.R. & Brancolini, K.R. (2018). Academic librarian research: an update to a survey on attitudes, involvement, and perceived capabilities. *College and Research Libraries* 79(6), 822-851. <https://doi.org/10.5860/crl.79.6.822>

Kennedy, M.R. & Brancolini, K.R. & Kennedy, D.P. (2020). An exploratory study of accomplished librarian-researchers. *Evidence based Library and Information Practice*, 15(1), 179-217. <https://doi.org/10.18438/eblip29655>

Kennedy, M.R., Kennedy, D.P. & Brancolini K.R. (2017). The evolution of personal networks of novice librarian researchers. *Portal: Libraries and the Academy* 17(1), 71-89. <https://doi.org/10.1353/pla.2017.0005>

Kloda, L.A., Koufogiannakis, D. and Brettle, A. (2014). Assessing the impact of evidence summaries in library and information practice. *Library and Information Research* 38(119), 29-46. Available: <https://lirjournal.org.uk/index.php/lir/article/view/644/660> [Accessed 22 September 2022]

Kumaran, M. (2019). Canadian academic librarians and the need for a systematic and comprehensive research-support model. *Canadian Journal of Academic Librarianship*, 5(1), 1-21. <https://doi.org/10.33137/cjal-rcbu.v5.29213>

Kuyper-Rushing, L. (2001). A formal mentoring program in a university library: components of a successful experiment. *Journal of Academic Librarianship* 27(6), 440-446. [https://doi.org/10.1016/S0099-1333\(01\)00258-0](https://doi.org/10.1016/S0099-1333(01)00258-0)

Luo, L. & McKinney, M. (2015). JAL in the past decade: a comprehensive analysis of academic library research. *Journal of Academic Librarianship* 41(2), 123-129. <https://doi.org/10.1016/j.acalib.2015.01.003>

Meadows, K.N., Berg, S.A., Hoffman, K., Gardiner, M.M. & Torabi, N. (2013). A needs-driven approach to supporting the research endeavours of academic librarians. *Partnership: the Canadian Journal of Library Information Practice and Research* 8(2), 1-32. <https://doi.org/10.21083/partnership.v8i2.2776>

Mowbray, J., Hall, H., Raeside, R. & Robertson, P.J. (2018). Job search information behaviours: an ego-net study of networking amongst young job-seekers. *Journal of Librarianship and Information Science*, 50(3), 239-253. <https://doi.org/10.1177/0961000618769965>

'From a network model to a model network: strategies for network development to narrow the LIS research-practice gap' by Hazel Hall, Bruce Ryan, Rachel Salzano and Katherine Stephen, accepted for publication by the *Journal of Documentation*, 27/09/22

Nguyen, L.C. & Hider, P. (2018). Narrowing the gap between LIS research and practice in Australia. *Journal of the Australian Library and Information Association*, 67(1), 3-19.  
<https://doi.org/10.1080/24750158.2018.1430412>

Partridge, H., Given, L.M., Abdi, E.S., Buchanan, G., Bunker, K., Luca, E., McKay, D. & Narayan, B. (2019). Bridging the library and information science – practice gap: a panel discussion, *Proceedings of the Association for Information Science and Technology* 56(1), 561-564.  
<https://doi.org/10.1002/pra2.92>.

Partridge, H., Haidn, I., Weech, T., Connaway, L.S. & Seadle, M. (2014). The researcher librarian partnership. *Library and Information Research* 38(118), 35-51. Available:  
<https://lirjournal.org.uk/index.php/lir/article/view/619/646> [Accessed 22 September 2022]

Pickton, M. (2016). Facilitating a research culture in an academic library: top down and bottom up approaches. *New Library World* 117(1/2), 105-127. <https://doi.org/10.1108/NLW-10-2015-0075>

Powell, R., Baker, L. & Mika, J. (2002). Library and information science practitioners and research. *Library and Information Science Research* 24(1), 49-72. [https://doi.org/10.1016/S0740-8188\(01\)00104-9](https://doi.org/10.1016/S0740-8188(01)00104-9)

Ryan, B. (2021). The RIVAL network: network building and the coronavirus. Paper presented at the *Annual Conference of the Chartered Institute of Library and Information Professionals Scotland* 7<sup>th</sup>-8<sup>th</sup> June 2021. Video and slides available from <https://www.cilips.org.uk/about/cilips-annual-conference-2021/> [Accessed 22 September 2022]

Sapon-White, R., King, V. & Christie, A. (2004). Supporting a culture of scholarship for academic librarians. *portal: Libraries and the Academy* 4(3), 407-21. <https://doi.org/10.1353/pla.2004.0044>

Schmidt, L., Boczar, J., Lewis, B. & Taylor, T. (2021). Increasing scholarly productivity: developing an in-house academic librarian support network. *Journal of Academic Librarianship* 47, 102385.  
<https://doi.org/10.1016/j.acalib.2021.102385>

Schultz-Jones, B. (2009). Examining information behaviour through social networks: an interdisciplinary review. *Journal of Documentation*, 65(4), 592-631.  
<https://doi.org/10.1108/00220410910970276>

Smigielski, E.M., Laning, M.A. & Daniels, C. (2014). Funding, time and mentoring: a study of research and publication support practices of ARL member libraries. *Journal of Library Administration* 54(4), 261-276.

*Special interest group: Library and Information Research Group (LIRG)* (2022). Available  
<https://www.cilip.org.uk/members/group.aspx?id=201305> [Accessed 22 September 2022]

Spring, H., Doherty, P., Boyes, C & Wilshaw, K. (2014). Research engagement in health librarianship: outcomes of a focus group. *Library and Information Science Research* 36, 142-153.  
<https://doi.org/10.1016/j.lisr.2014.06.004>

Stephens, J., Sare, L., Kimball, R., Foster, M. & Kitchens, J. (2011). Tenure support mechanisms provided by the Faculty Research Committee at Texas A&M University Libraries: a model for academic libraries. *Library Management* 32(8/9), 531-539.  
<https://doi.org/10.1108/01435121111187897>

'From a network model to a model network: strategies for network development to narrow the LIS research-practice gap' by Hazel Hall, Bruce Ryan, Rachel Salzano and Katherine Stephen, accepted for publication by the *Journal of Documentation*, 27/09/22

Sullivan, D., Leong, J., Yee, A., Giddens, D. & Phillips, R. (2013). Getting published: group support for academic librarians. *Library Management* 34(8/9), 690-704. <https://doi.org/10.1108/LM-03-2013-0026>

Tammaro, A.M. (2018). The researcher-librarian training workshop: building a culture of research methods. *IFLA Library Theory and Research Newsletter*, June, 2-3. Available: <https://www.ifla.org/wp-content/uploads/2019/05/assets/library-theory-and-research/newsletters/july-2018.pdf> [Accessed 22 September 2022]

Turner, K.J. (2002). Do information professionals use research published in LIS journals? *Proceedings of the 68<sup>th</sup> IFLA Council and General Conference*, August 18-24, 2002, Glasgow. Available: <https://archive.ifla.org/IV/ifla68/papers/009-118e.pdf> [Accessed 22 September 2022]

Tysick, C. & Babb, N. (2006). Writing support for junior faculty librarians: a case study. *Journal of Academic Librarianship* 32(1), 94-100. <https://doi.org/10.1016/j.acalib.2005.10.005>

Williamson, C.C. (1931). The place of research in library service. *The Library Quarterly: Information, Communication and Policy* 1(1), 1-17. <https://doi.org/10.1086/612836>