

Bibliometric competencies- Preliminary findings of a Lis-bibliometrics survey

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Aims of the study

Tasks

- To identify the tasks that those working in bibliometrics undertake

Level

- To identify how those working in bibliometrics perceive which of these tasks are entry level, core and specialist

Model

- To produce a visual model of bibliometric competencies and validate it with the community

Development of a community-supported set of bibliometric competencies

Methods of the study

- A list of 99 bibliometric tasks assigned to 12 broad categories was produced based on
 - data from the lis-bibliometrics workshop in June 2016
 - data from Sabrina's PhD research including 10 expert interviews with UK information professionals and various documents such as blogs
- The list was compiled in a questionnaire and distributed to members of lis bibliometrics and the metrics list of Arma Association in January 2017
- The results of the questionnaire were analysed by means of descriptive statistics

Categorization of bibliometric tasks

A. Awareness raising and responsible use
B. Applications of bibliometrics
C. Metrics: About scholars, academic units and institutions
D. Metrics: About journals
E. Metrics: About articles/ specific outputs
F. Metrics: About Impact
G. Bibliometric tools
H. General data handling and presentation tasks
I. Training, education and advice to users
J. Systems procurement and use
K. Policy and strategy
L. Professional skills

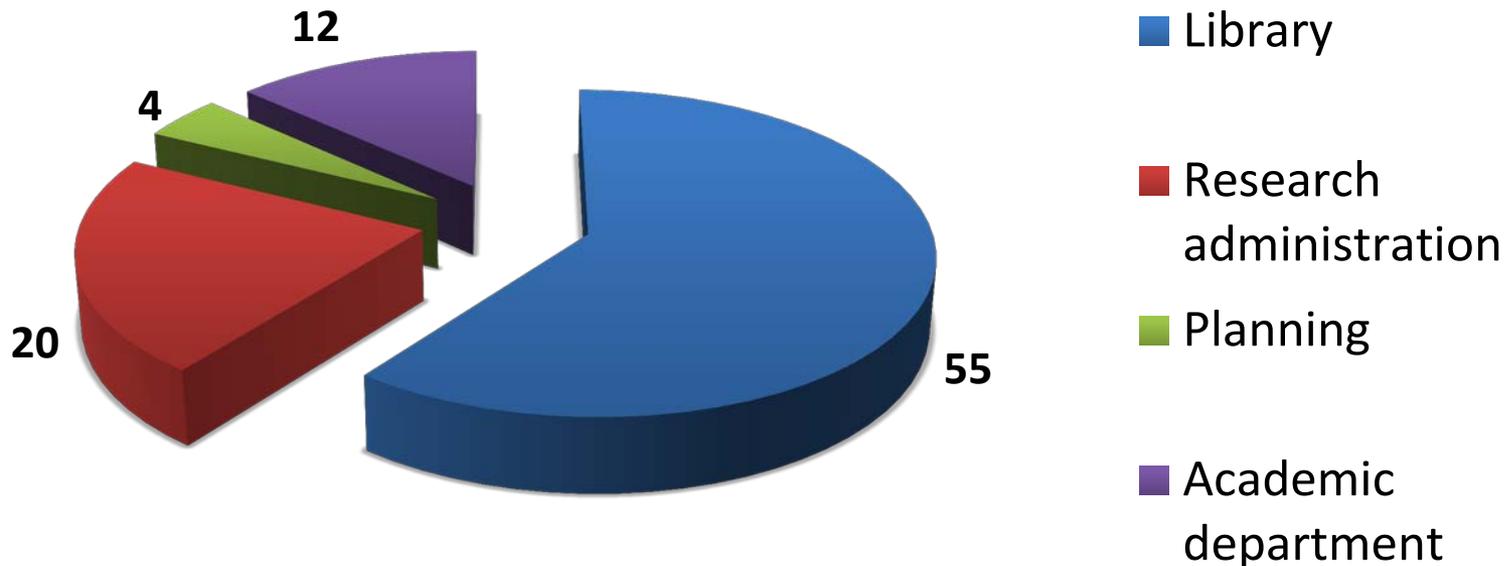
Competency levels of bibliometric tasks

- **Entry level** – a basic task of bibliometrics, one that a newly qualified professional should be able to perform
- **Core level** – a core task of bibliometrics, one that an established professional with a responsibility for bibliometrics performs beyond entry level tasks
- **Advanced/ Specialist level** – a task involving very specialist knowledge and evaluative skills
- Out of scope of the role

Responses to questionnaire

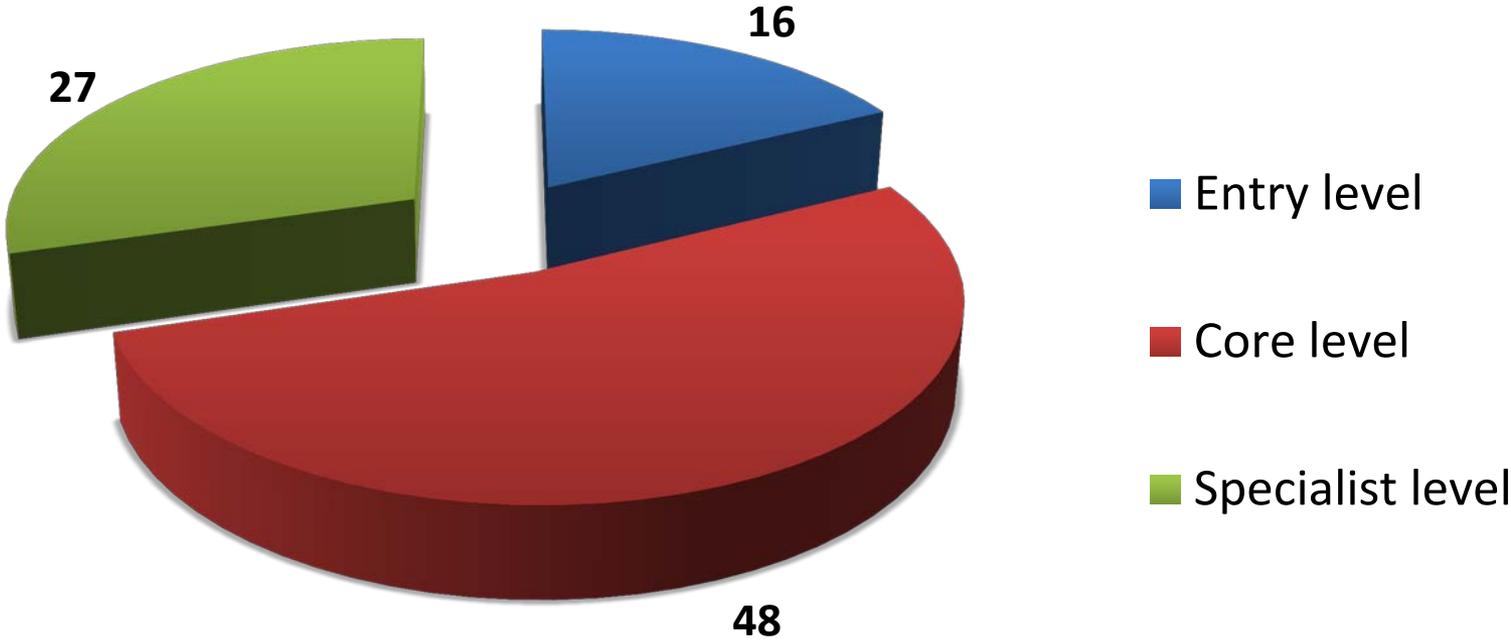
- 92 valid responses, mostly from the UK (N=48)

Organisational location of respondents



Preliminary findings

Distribution of levels across tasks



Preliminary findings: Entry level tasks

A2. Explains the concept of altmetrics	65 (71%)
A13. Explains the benefits of open access	59 (64%)
C1. Uses bibliometric tools to find metrics on a specific scholar: H-index	56 (61%)
D1. Uses bibliometric tools to find metrics on an individual journal: JIF	68 (74%)
D2. Uses bibliometric tools to find metrics on an individual journal: 5 year impact factor	61 (66%)
D3. Uses bibliometric tools to find metrics on an individual journal: SNIP	62 (67%)
D5. Uses bibliometric tools to find metrics on an individual journal: SCImago Journal Rank	61 (66%)
E1. Uses bibliometric tools to find citations for a specific article	71 (77%)
L7. Learns to update skills	57 (62%)

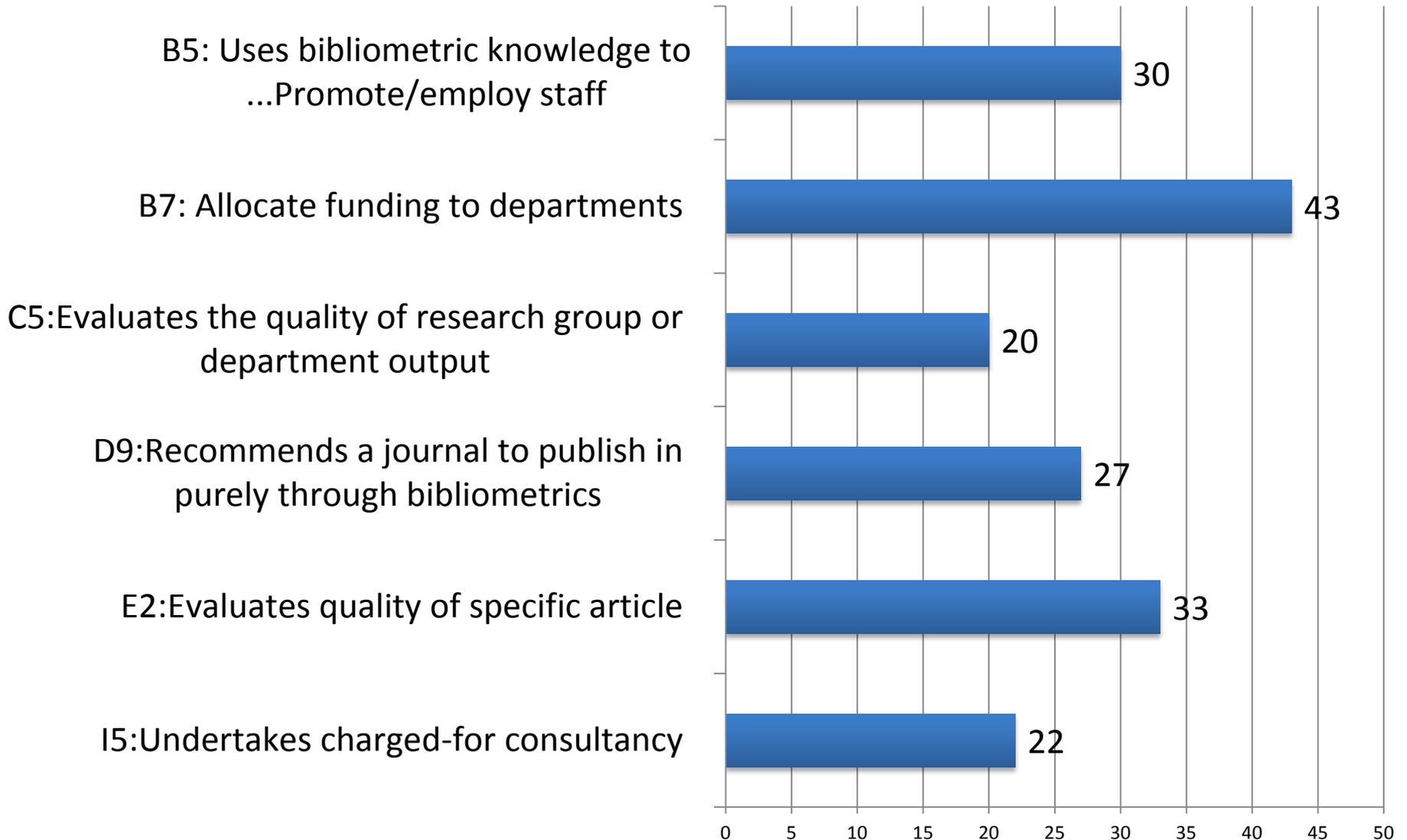
Core tasks

A3. Advises on which are the appropriate tool(s) for a particular metric	63 (69%)
A4. Explains differences in results between metrics based on different tools	62 (67%)
A6. Applies responsible use principles to specific requests/cases and in their own practices	59 (64%)
B3. ...Increase staff bibliometric literacy	67 (73%)
B13. ...Support academic bibliometric research	56 (61%)
G2. Chooses the right tool for a specific task	56 (61%)
I1. Writes documentation	60 (65%)
I2. Designs online training	63 (69%)
I3. Delivers group f2f training	69 (75%)
I4. Delivers 1:1 training	70 (76%)
L2. Creates and sustains professional networks inside the organisation	67 (73%)

Specialist tasks

A9. Understands the potential use of text mining in bibliometrics	59 (64%)
B6. Uses bibliometric knowledge to ...Evaluate departmental/research centre performance	57 (62%)
B8. ...Evaluate institutional performance	55 (60%)
B13. ...Support academic bibliometric research	56 (61%)
C7. Analyses collaboration patterns in a research group or department (including to compare with competitors)	59 (64%)
C14. Examines trends in institutional performance and advises on improving its ranking	58 (63%)
F3. Gathers evidence to support a national research assessment exercise impact case study	55 (60%)
H2. Conducts manual statistical analyses outside of proprietary tools	58 (63%)
H3. Applies statistical tests of significance to analyses	73 (79%)
H4. Undertakes programming for downloading/manipulating data	68 (74%)
H5. Undertakes Network analysis for bibliometrics	76 (83%)
H6. Undertakes text mining for bibliometric purposes	72 (78%)
I5. Undertakes charged-for consultancy	61 (66%)
J4. Advises on decisions about how the institution should use specific tools	59 (64%)

Tasks out of scope



International differences

UK *more* likely to consider the following as entry level/core:

- A5. Explains responsible use as a general set of principles
- A7. Advises on the applicability of metrics to particular disciplines/metadisciplines (e.g. Arts and Humanities)
- E3. Advises on how to increase citations of articles
- E4. Advises on how to use social media to increase citation
- E6. Explains metrics for research data

International differences

UK *less* likely to consider the following as entry level/core:

- H1. Downloads, cleans and manipulates bibliometric data
- H2. Conducts manual statistical analyses outside of proprietary tools
- H4. Undertakes programming for downloading/manipulating data
- I5. Undertakes charged-for consultancy

Growth areas

Please locate your neighbour to you left and right side.

Please discuss potential growth areas with your neighbours and jot down your ideas on the sheets of paper handed out to you.

Engage first with your left neighbour for 5 minutes and then with your right neighbour.

We will discuss the results together after 10-12 minutes.

Growth areas

Section heading	Top three tasks
A. Awareness raising and responsible use	Author identifiers 17 (46%) Responsible use 16 (43%) Applicability of metrics to specific disciplines 16 (43%)
A. Applications of bibliometrics	National Research Assessed exercise 19 (68%) Evaluating institutional performance 12 (57%) Supporting grant applications 10 (36%)
A. Metrics: About scholars, academic units and institutions	Institutional metrics and benchmarking 15 (68%) Trends in institutional performance 15 (55%) Identifying institutional strengths 12 (68%)
E. Metrics: About articles/ specific outputs	Research data 20 (100%) Metrics for books 10 (50%) Use of social media 10 (50%)

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