

ALISE 2023 Juried Paper Presentation

Competency-Based Education/Training (CBE/CBT) in Data Services: Data Service Continuing Professional Education (DSCPE) and Learning Outcomes

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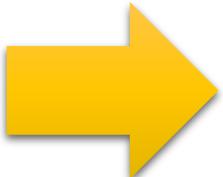
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Harvard Countway Library of Medicine

Background

U.S. Federal mandates
on data management and
sharing
(e.g., NIH, NSF, OSTP)

Increasing role of Library
and Information
Professionals in providing
data services



Data Services Continuing Professional Education (DSCPE)



- Addressing needs of training working librarians and information professionals in data services provision
- Competency-based education/training (CBE/CBT) approach
- 2022 pilot cohort (N=15)

DSCPE Program

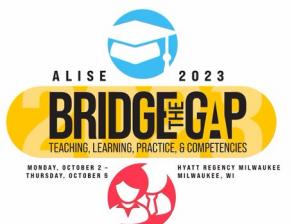


- **The Program:**

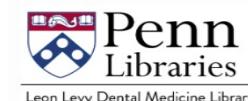
- Ten-week online intensive learning experience;
- Preparing working professionals to provide needed data services.

- **Delivery format:**

- 70 Hours Capstone program;
- Online live sessions;
- Remote self-paced learning (RDMLA);
- Guest speakers;
- Capstone site partners;



Capstone Partners



Research Questions

RQ1

- What KSAs, topics, and experiences did the DSCPE students indicate that they wished to gain prior to joining the program?

RQ2

- What KSAs did the DSCPE students report that they actually obtained through DSCPE?

RQ3

- What KSAs did the capstone mentors indicate as essential for a successful capstone?

RQ4

- What areas of data services KSAs were successfully matched? What are the gaps? What are unexpected competencies obtained?

Literature

CBE

Competency-based education is an innovative educational paradigm that promotes equity and empowers learners by enabling them to advance based on what they know and can do with high flexibility and individualized pathways to learning (Gervais, 2016; Sturgis & Casey, 2018).

Data
Competency

The knowledge and skills required to manage, research, analyze, assess and advocate to use data (Chen et al., 2018).

Data Service
Provision

Services which encompass multiple research-related tasks such as supporting researchers in planning, collecting, describing, preserving, discovering as well as analyzing research data (Flores et al., 2015; Volentine et al., 2017)

Methodology



Pre-Program Students' Expectation

- Students' Survey
- Personal Statement



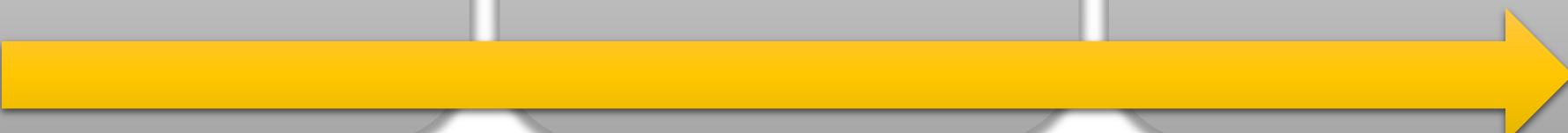
Mid-Point Performance Data

- Students' Survey
- Mentors' Survey



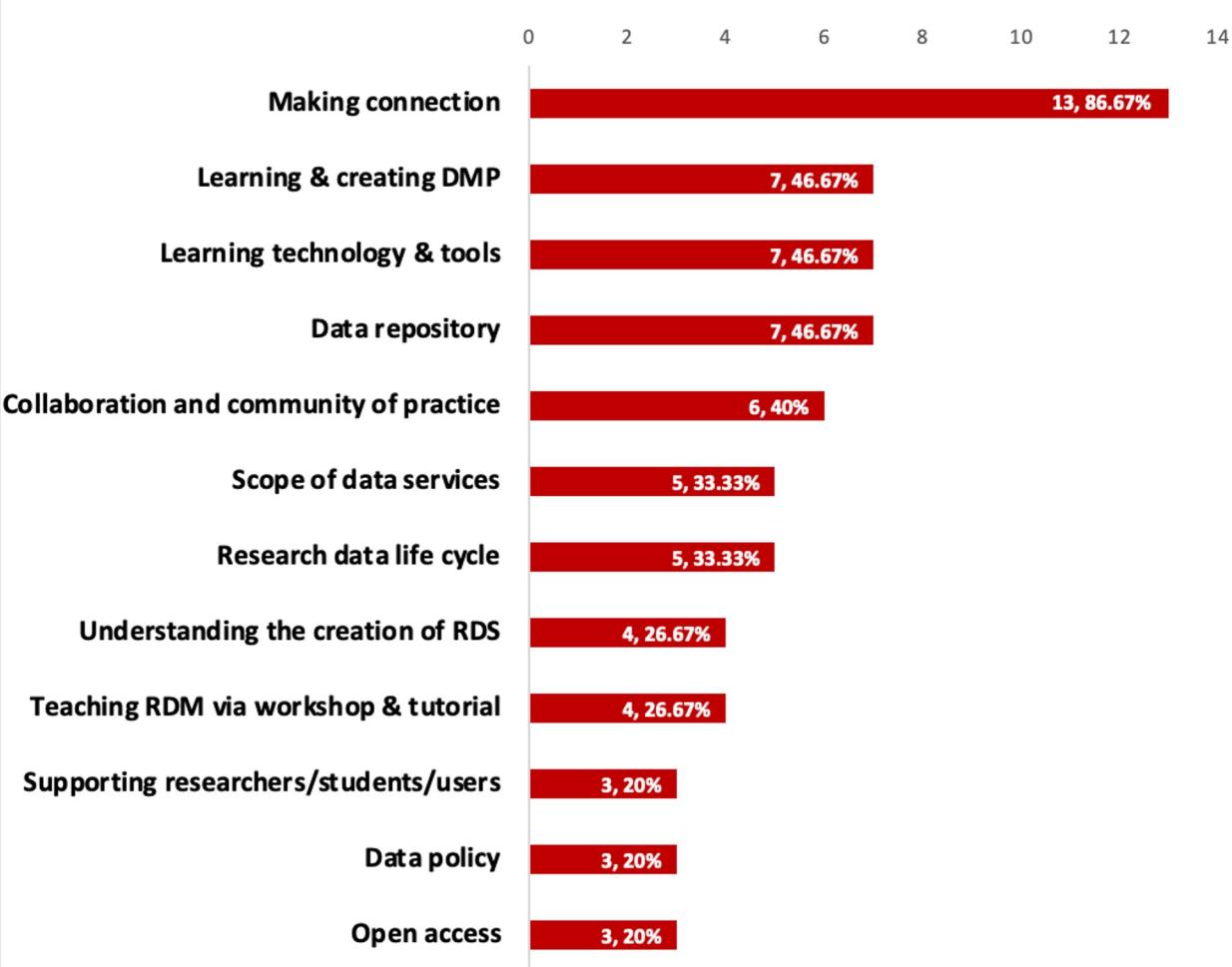
Post-Program Feedback Data

- Students' Survey
- Mentors' Survey
- Focus Group
- Students' Presentations

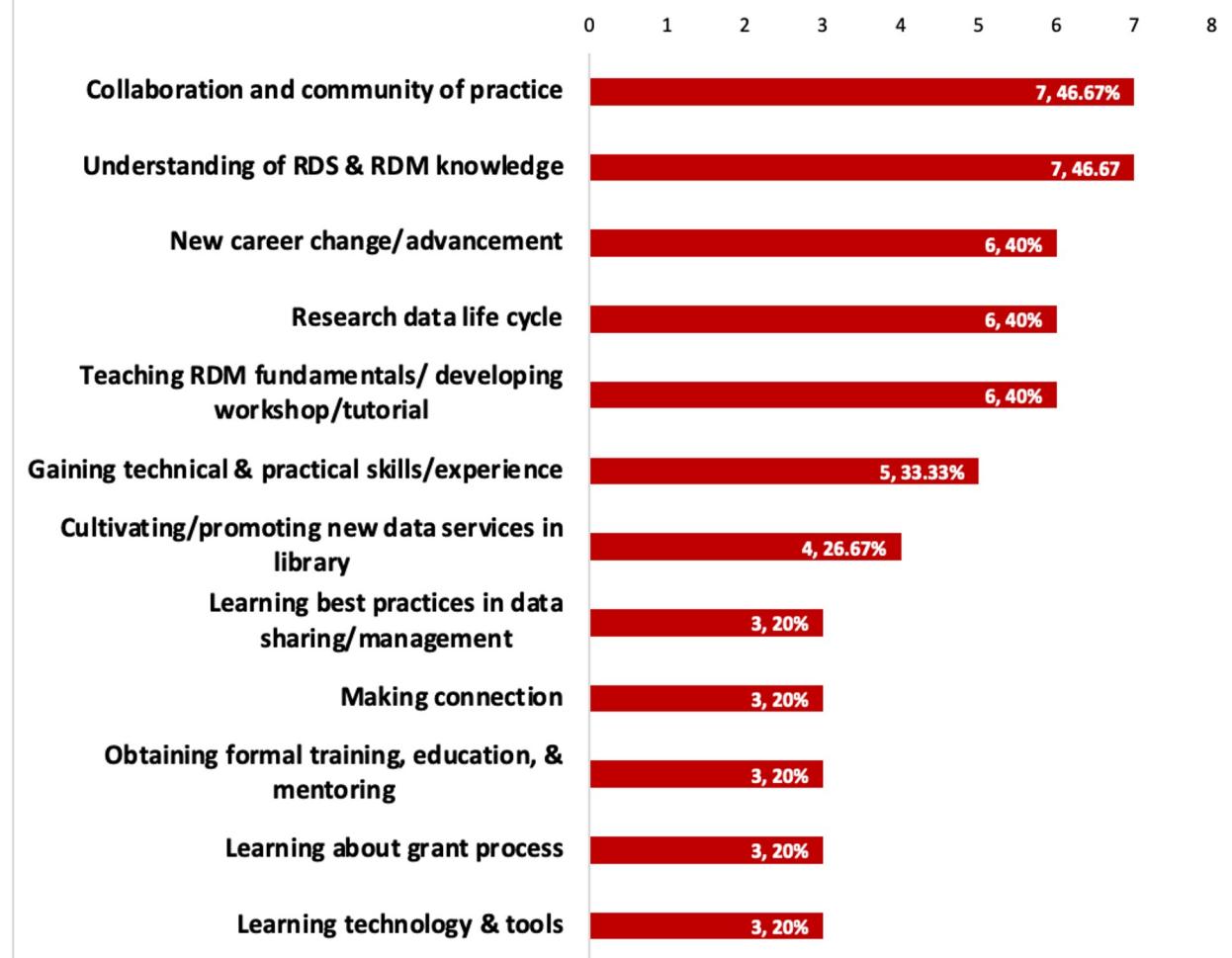


Results: Pre-Program Expected Learning Outcomes

Pre-program Survey



Personal Statement

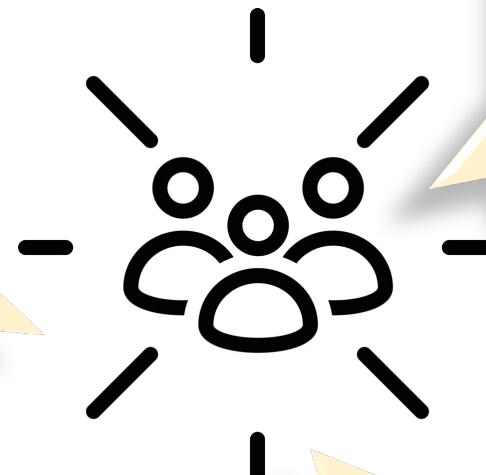


Results: Mid-Point Evaluation | Surveys

Midpoint Questions or Topics	Most Frequent Responses or Comments	Frequency
<i>Mentors</i>		
Student's overall communication in first 35 hours	Sufficient	N=15, 100%
Start of the Capstone	Smooth	N=12, 80.00%
Performance	Exceeding expectations	N=8, 53.33%
<i>Students</i>		
Response to Initial Contact	Responded quickly on the same day	N=10, 66.67%
Overall Communication	Sufficient	N=14, 93.33%

Results: Post-Program | Students Comments Surveys & Focus Group

“Sincerely appreciated the larger vision of this program. ... I haven't seen many of these types of programs around, and I appreciate the role of this program in helping to create a community of practice around an emerging field.”

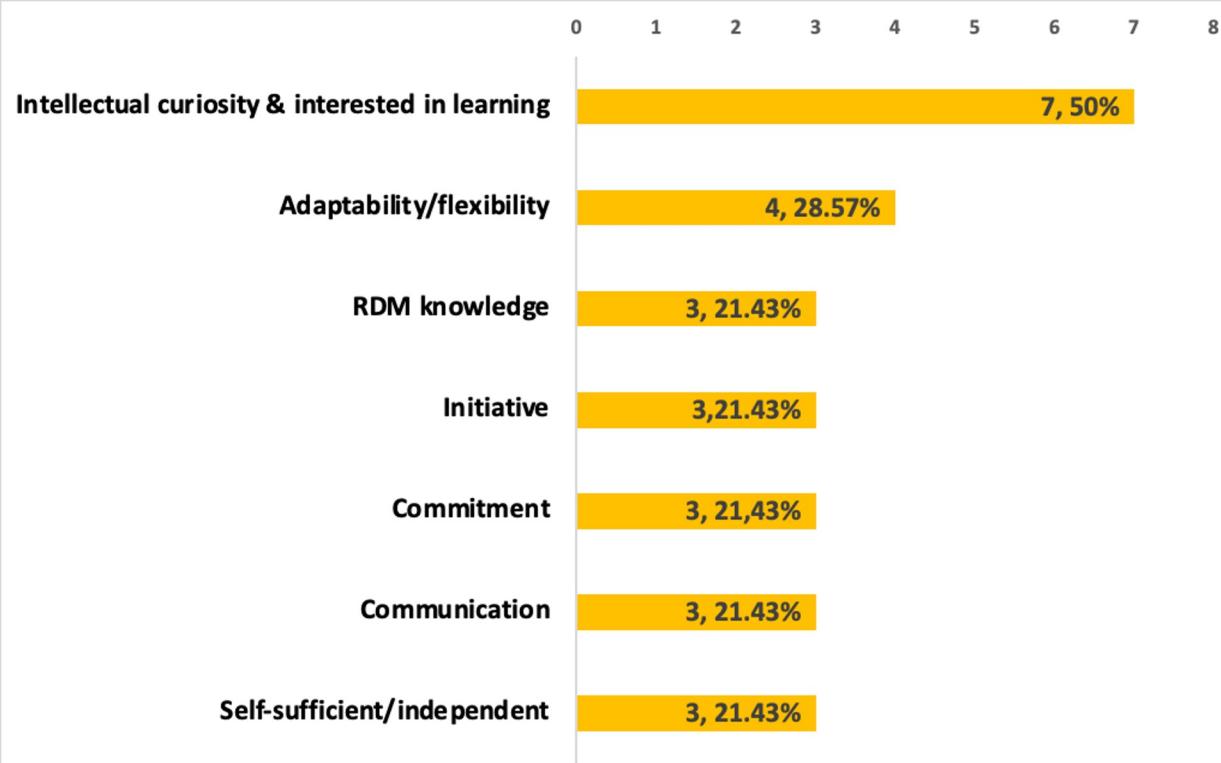


I gained what I felt like was a sense of true camaraderie and shared goal-setting with an academic librarian for the very first time. ... A truly invaluable experience for me.”

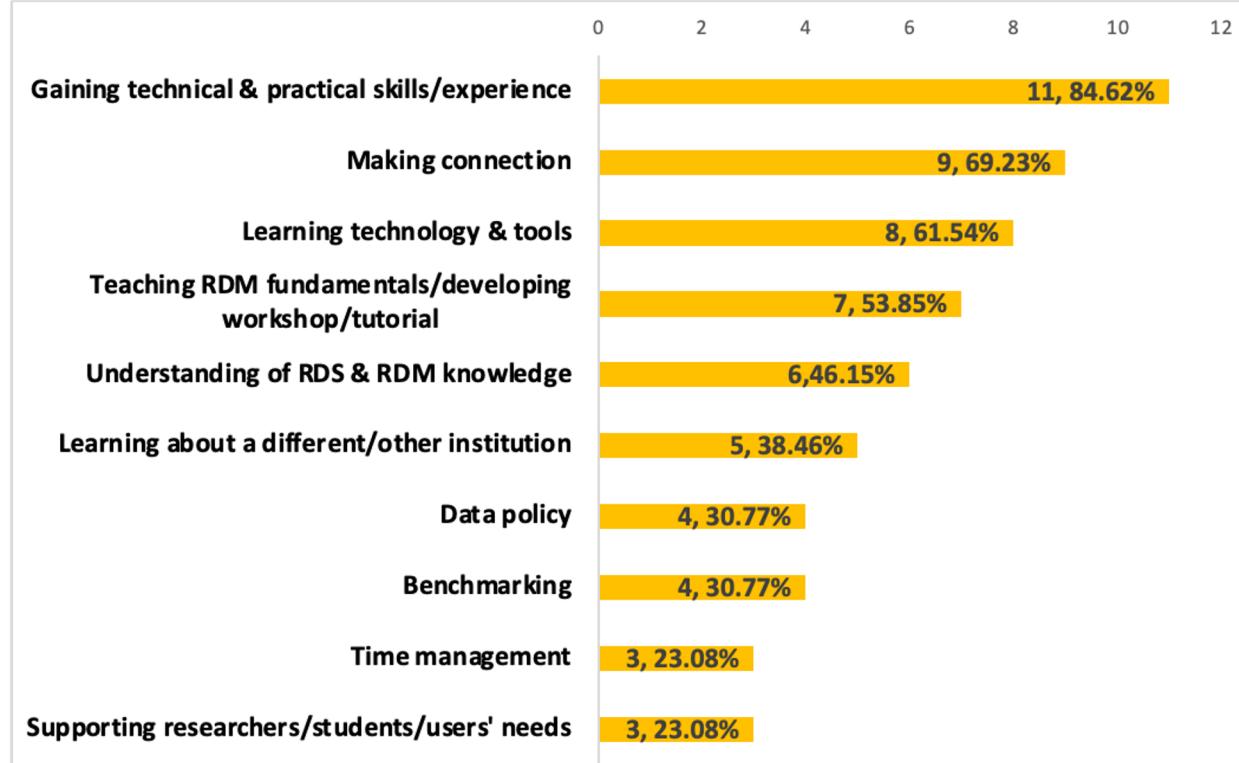
“Fantastic overview of basic topics as well as understanding of current issues/potential solutions. I entered into this as a novice. I have a much better understanding and appreciation of the landscape and skills required of this side of librarianship.”

Results: Post-Program KSAs – Capstone Presentations

KSA expected from mentors for successful capstone



KSA gained from the Capstone Project



Results: Comparative Analysis of Pre & Post-Program Competency Items

Pre-program Expected Learning Outcomes	Pre-program survey	Pre-program personal statement	Themes	Capstone Presentation	Post-program survey/focus group	Post-program Reported Learned Outcomes
	✓	✓	Learning technology and tools	✓	✓	
	✓	✓	Teaching RDM fundamentals/ developing workshop/tutorial	✓	✓	
	✓	✓	Understanding of RDS & RDM Knowledge	✓	✓	
	✓	✓	Making connection	✓	✓	
	✓	✓	Collaboration and community of practice	✓	✓	
	✓	✓	Learning about a different/other institution	✓	✓	
	✓	✓	Learning & creating DMP		✓	
	✓		Data policy	✓	✓	
	✓	✓	Supporting researchers/students/users		✓	
	✓	✓	Gaining technical & practical skills/experience	✓		
	✓	✓	Learning about grant process		✓	
		✓	New career change/advancement	✓	✓	
	✓		Data repository		✓	
	✓		Data visualization		✓	
	✓		Data analysis		✓	
	✓		Refreshing/updating professional skill sets	✓		
	✓		Cohort learning		✓	

17 items achieved a match

Six appear in three measuring points

Five appear in two measuring points

Discussion

Strength of the DSCPE

17 matching items of the pre-program and post-program.

Areas of Improvement

Nine unmatched pre-program items might suggest areas we could improve, such as more content in “**Research data life cycle**,” “**Conducting RDS interviews**,” and “**Open access practices**.”

Good Unexpected Outcomes

Six unmatched post-program outcomes suggest good unexpected outcomes such as “**Gaining confidence**” and “**Empathy**” that turned into useful long-term competencies for students.

Fall 2023 Cohort, Capstone Partners, and Beyond

15 Students

- 14 Female
- One Male

12 States Represented

- 7 from South
- 3 from West
- 3 from Northeast
- 2 from Midwest

Employment Settings

- Academic Library
- Hospital Library
- Government Library

Capstone Partners



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The University of Alabama at Birmingham
UAB



Rensselaer
UNIVERSITY
OF MINNESOTA

Our
GOAL

Continue to foster and nurture a
community of data services librarians

**Any Questions?
Thank you!**

For more information about RDMLA and
DSCPE, please scan our QR code.

