

Today's Agenda

Part 1

- NAPLeS: The Network of Academic Programs in the Learning Sciences

Part 2

- Teaching the Learning Sciences: an analysis of 75 programs

NAPLeS: The Network of Academic Programs in the Learning Sciences

The International Society of the Learning Sciences (ISLS)

The ISLS Education Committee

- Creating and developing outreach and educational activities for ISLS
- Learning Sciences doctoral consortia
- Early/mid career workshops
- NAPLeS as initiative to connect degree programs worldwide

NAPLeS: The Network of Academic Programs in the Learning Sciences

NAPLeS

- Network of PhD and Master's programs in the Learning Sciences
- Part of the educational mission

Fostering the quality of higher education programs in LS

Mechanisms

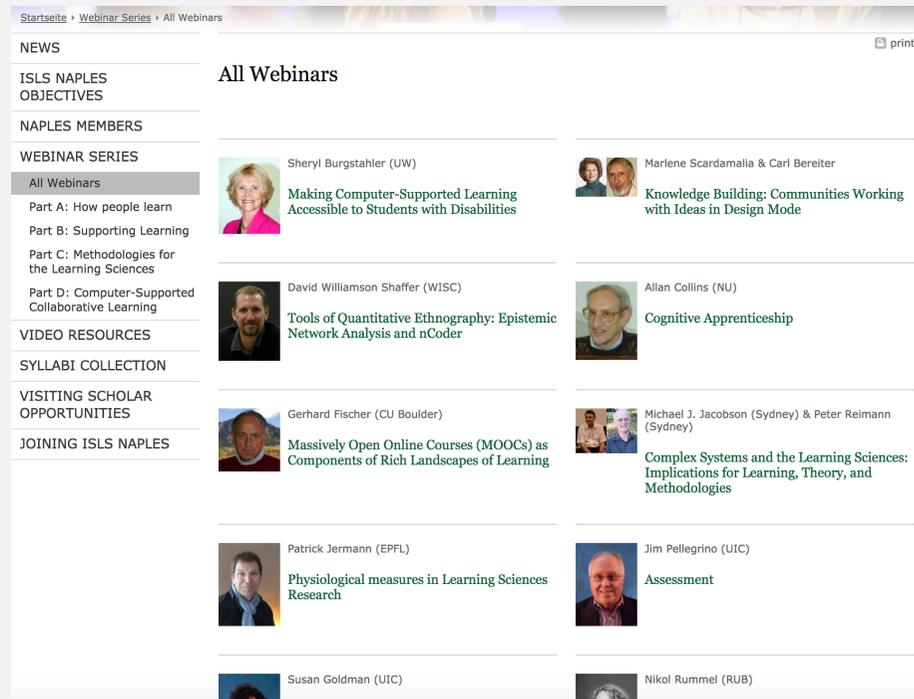
- Webinar series
- Video resources
- Syllabi collection
- Visiting scholarship
- Joint supervision of doctoral research

NAPLeS: The Network of Academic Programs in the Learning Sciences

NAPLeS Resources

Webinar Series:

<http://isls-naples.psy.lmu.de/intro/all-webinars/index.html>



The screenshot shows the 'All Webinars' page on the NAPLeS website. The page has a navigation menu on the left with categories like NEWS, ISLS NAPLES OBJECTIVES, NAPLES MEMBERS, WEBINAR SERIES, VIDEO RESOURCES, SYLLABI COLLECTION, VISITING SCHOLAR OPPORTUNITIES, and JOINING ISLS NAPLES. The 'WEBINAR SERIES' section is active, with 'All Webinars' selected. The main content area displays a grid of webinar entries, each with a small portrait photo of the speaker(s) and the title of the webinar.

All Webinars	
 <p>Sheryl Burgstahler (UW) Making Computer-Supported Learning Accessible to Students with Disabilities</p>	 <p>Marlene Scardamalia & Carl Bereiter Knowledge Building: Communities Working with Ideas in Design Mode</p>
 <p>David Williamson Shaffer (WISC) Tools of Quantitative Ethnography: Epistemic Network Analysis and nCoder</p>	 <p>Allan Collins (NU) Cognitive Apprenticeship</p>
 <p>Gerhard Fischer (CU Boulder) Massively Open Online Courses (MOOCs) as Components of Rich Landscapes of Learning</p>	 <p>Michael J. Jacobson (Sydney) & Peter Reimann (Sydney) Complex Systems and the Learning Sciences: Implications for Learning, Theory, and Methodologies</p>
 <p>Patrick Jermann (EPFL) Physiological measures in Learning Sciences Research</p>	 <p>Jim Pellegrino (UIC) Assessment</p>
 <p>Susan Goldman (UIC)</p>	 <p>Nikol Rummel (RUB)</p>

NAPLeS: The Network of Academic Programs in the Learning Sciences

NAPLeS Resources

Webinar Series:

<http://isls-naples.psy.lmu.de/intro/all-webinars/scardamalia-bereiter/index.html>

Startseite • Webinar Series • All Webinars • Marlene Scardamalia & Carl Bereiter: Knowledge Building: Communities Working with Ideas in Design Mode print

NEWS

ISLS NAPLES OBJECTIVES

NAPLES MEMBERS

WEBINAR SERIES

- All Webinars
- Part A: How people learn
- Part B: Supporting Learning
- Part C: Methodologies for the Learning Sciences
- Part D: Computer-Supported Collaborative Learning

VIDEO RESOURCES

SYLLABI COLLECTION

VISITING SCHOLAR OPPORTUNITIES

JOINING ISLS NAPLES

Marlene Scardamalia & Carl Bereiter: Knowledge Building: Communities Working with Ideas in Design Mode print

Basic reading

- Bereiter, C. & Scardamalia, M. (2014). Knowledge building and knowledge creation: One concept, two hills to climb. In S. C. Tan, H. J. So, J. Yeo (Eds) *Knowledge creation in education* (pp. 35-52). Singapore: Springer [\[online\]](#)



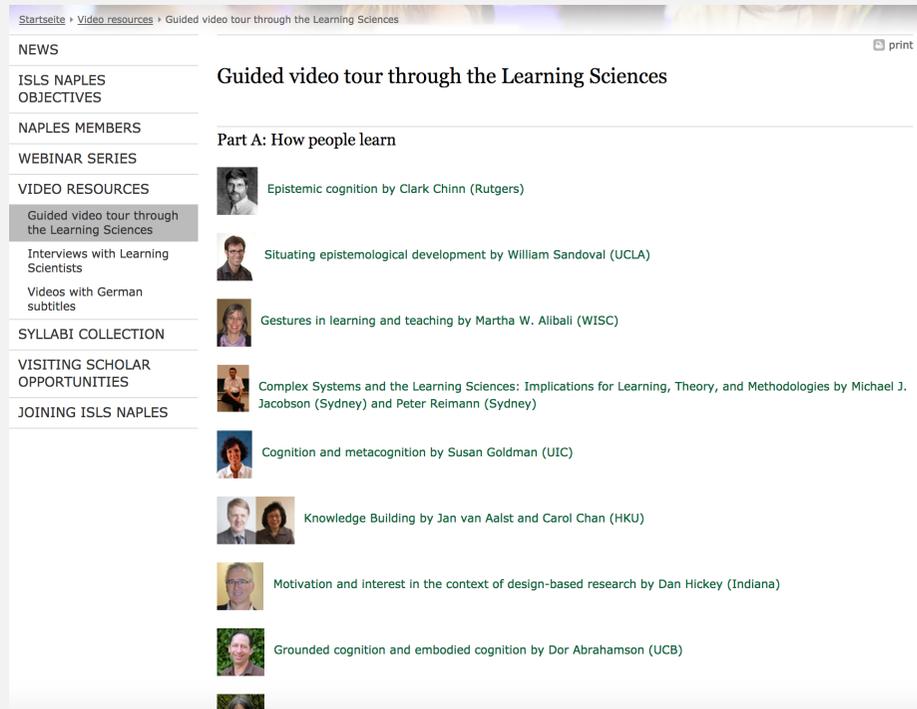
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NAPLeS: The Network of Academic Programs in the Learning Sciences

NAPLeS Resources

Guided Tour through the LS:

<http://isls-naples.psy.lmu.de/video-resources/guided-tour/index.html>



The screenshot displays a webpage titled "Guided video tour through the Learning Sciences". The page features a navigation menu on the left with categories such as NEWS, ISLS NAPLES OBJECTIVES, NAPLES MEMBERS, WEBINAR SERIES, VIDEO RESOURCES (highlighted), SYLLABI COLLECTION, VISITING SCHOLAR OPPORTUNITIES, and JOINING ISLS NAPLES. The main content area lists several video resources under the heading "Part A: How people learn".

Video Resource	Author
Epistemic cognition	Clark Chinn (Rutgers)
Situating epistemological development	William Sandoval (UCLA)
Gestures in learning and teaching	Martha W. Alibali (WISC)
Complex Systems and the Learning Sciences: Implications for Learning, Theory, and Methodologies	Michael J. Jacobson (Sydney) and Peter Reimann (Sydney)
Cognition and metacognition	Susan Goldman (UIC)
Knowledge Building	Jan van Aalst and Carol Chan (HKU)
Motivation and interest in the context of design-based research	Dan Hickey (Indiana)
Grounded cognition and embodied cognition	Dor Abrahamson (UCB)

NAPLeS: The Network of Academic Programs in the Learning Sciences

NAPLeS Resources

Interviews:

<http://isls-naples.psy.lmu.de/video-resources/interviews-ls/index.html>

Startseite » Video resources » Interviews with Learning Scientists print

NEWS

ISLS NAPLES OBJECTIVES

NAPLES MEMBERS

WEBINAR SERIES

VIDEO RESOURCES

Guided video tour through the Learning Sciences

Interviews with Learning Scientists

Videos with German subtitles

SYLLABI COLLECTION

VISITING SCHOLAR OPPORTUNITIES

JOINING ISLS NAPLES

Interviews with Learning Scientists

Experts in the Learning Sciences talk about their topic, it's significance for and position in the Learning Sciences:

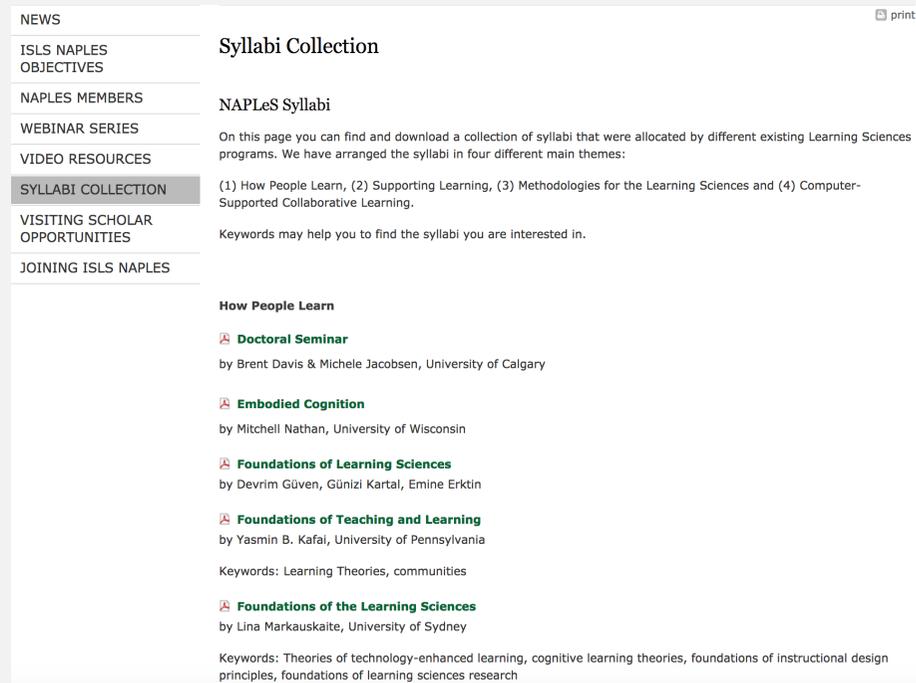
	Iris Tabak (BGU) and Brian Reiser (NWU) Interview about Scaffolding		Jeremy Roschelle (SRI) Interview about "Convergent Conceptual Change" -- Reflections on a JLS article that lasted 20 years
	Carolyn Rosé (Carnegie Mellon University) Interview about Learning analytics and educational data mining in learning discourses		Clark Chinn (Rutgers) Interview about Epistemic cognition
	William Sandoval (UCLA) Interview about Situating epistemological development		Mimi Recker (USU) Interview about Teacher learning and technology
	Tim Koschmann (SIUmed) Interview about Conversation and interaction analysis/ ethnomethodological approaches		Pierre Dillenbourg (EPFL) Interview about Orchestrating CSCL
	Sten Ludvigsen (UIO) Interview about Workplace learning with digital resources		Jim Pellegrino (UIC) Interview about Assessment

NAPLeS: The Network of Academic Programs in the Learning Sciences

NAPLeS Resources

Syllabi:

<http://isls-naples.psy.lmu.de/syllabi/index.html>



NEWS print

ISLS NAPLES OBJECTIVES

NAPLES MEMBERS

WEBINAR SERIES

VIDEO RESOURCES

SYLLABI COLLECTION

VISITING SCHOLAR OPPORTUNITIES

JOINING ISLS NAPLES

Syllabi Collection

NAPLeS Syllabi

On this page you can find and download a collection of syllabi that were allocated by different existing Learning Sciences programs. We have arranged the syllabi in four different main themes:

(1) How People Learn, (2) Supporting Learning, (3) Methodologies for the Learning Sciences and (4) Computer-Supported Collaborative Learning.

Keywords may help you to find the syllabi you are interested in.

How People Learn

- Doctoral Seminar**
by Brent Davis & Michele Jacobsen, University of Calgary
- Embodied Cognition**
by Mitchell Nathan, University of Wisconsin
- Foundations of Learning Sciences**
by Devrim Güven, Günizi Kartal, Emine Erkin
- Foundations of Teaching and Learning**
by Yasmin B. Kafai, University of Pennsylvania

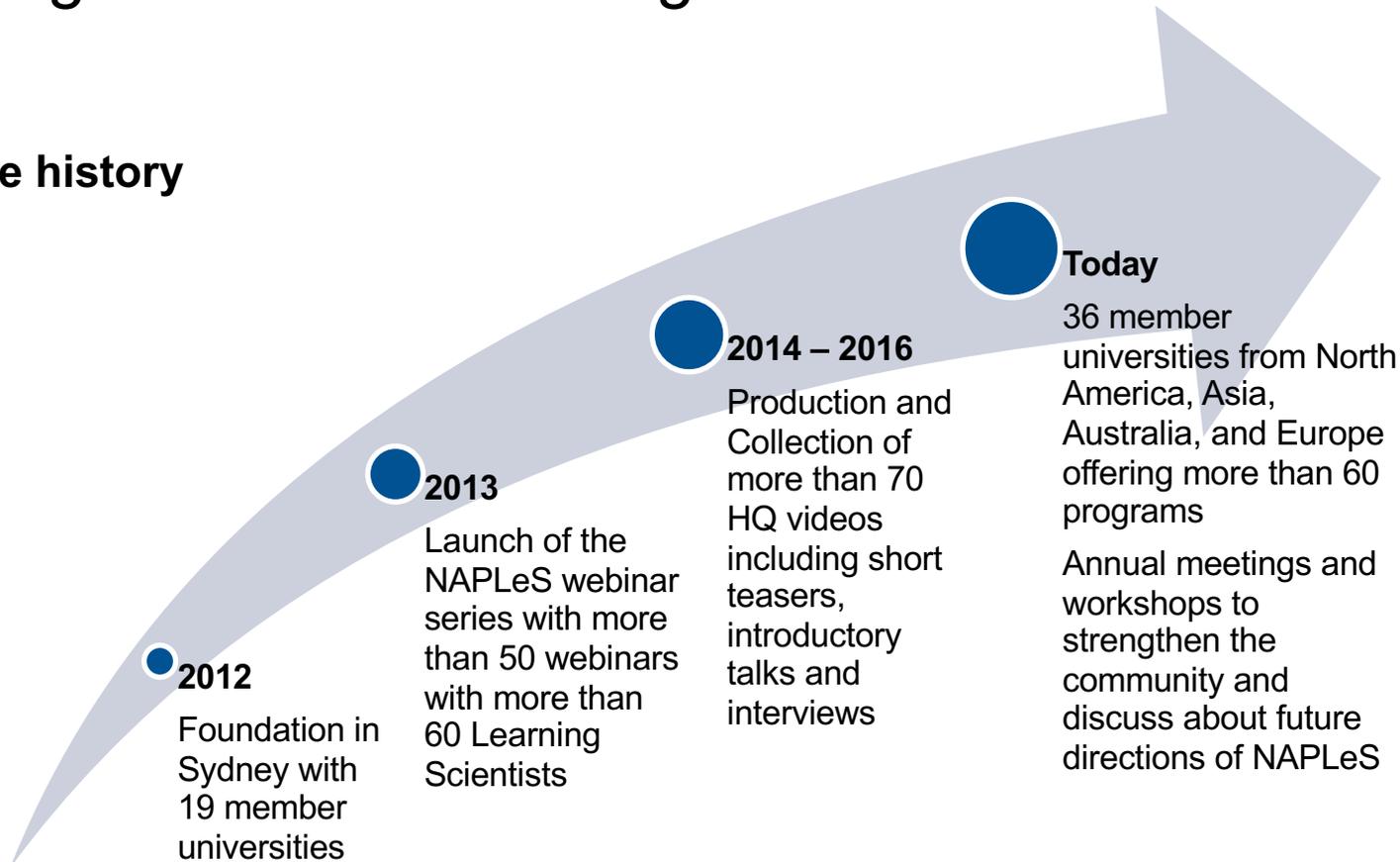
Keywords: Learning Theories, communities

- Foundations of the Learning Sciences**
by Lina Markauskaite, University of Sydney

Keywords: Theories of technology-enhanced learning, cognitive learning theories, foundations of instructional design principles, foundations of learning sciences research

NAPLeS: The Network of Academic Programs in the Learning Sciences

The history



NAPLeS: The Network of Academic Programs in the Learning Sciences

NAPLeS members

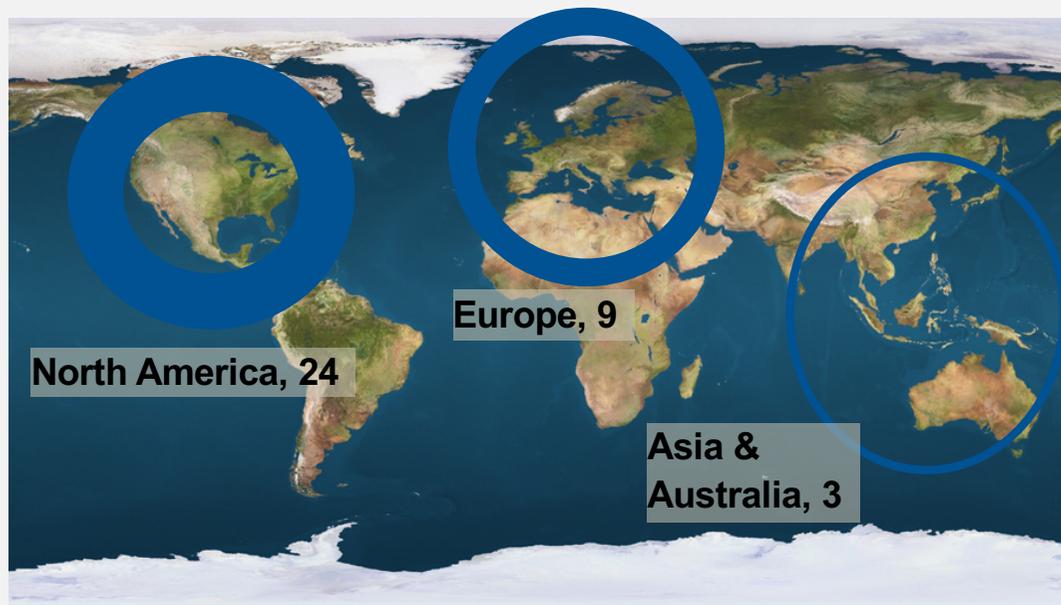
Status quo:

Concentration on programs in North America, (Europe, and Asia)

Future directions:

Reach out to programs in Asia and Europe

Collaboration with Learning Sciences initiatives in **Africa** and South America



NAPLeS: The Network of Academic Programs in the Learning Sciences

USA

- Carnegie Mellon University, Indiana University, New York University, Northwestern University, North Carolina State University, Penn State University, Rutgers University, Stanford University, University at Buffalo, University of California Berkeley, University of California Los Angeles, University of Illinois at Chicago, University of Illinois at Urbana-Champaign, University of New Mexico, University of North Carolina, University of Pennsylvania, University of Pittsburgh, University of Washington, University of Wisconsin-Madison, Utah State University

Canada

- McGill University, Simon Fraser University, University of Calgary, University of Toronto

Europe

- Boğaziçi University, Open University of the Netherlands, Ruhr University Bochum, Saarland University, University of Munich, University of Nottingham, University of Oulu

Asia, Middle East, Australia

- Nanyang Technological University, Singapore, University of Haifa, University of Hong Kong, University of Sydney

NAPLeS: The Network of Academic Programs in the Learning Sciences

Learning resources

Status quo:

- Collection of > 100 videos (recorded webinars, introductions, and interviews) for > 50 topics
- Collection of > 30 syllabi
- NEW: Selection of videos with German captions for local educational use

Future directions:

- Tagging, editing, and creating new videos around a topic for different learners
- Collecting and creating syllabi that build on the use of NAPLeS resources

NAPLeS: The Network of Academic Programs in the Learning Sciences

NAPLeS webpage

Status quo:

- Static website offering NAPLeS information and resources
- Hosted by the Ludwig-Maximilian University of Munich with limited features

Future directions:

- Shifting the NAPLeS content to the website hosted by ISLS
- More features using the Drupal system
- Including more interactive and social features (member login, exchange, etc.)

NAPLeS: The Network of Academic Programs in the Learning Sciences

How to become a NAPLeS member program?

Two main requirements

- PhD or Master's program in the area of Learning Sciences
- At least **3 ISLS members** associated with the program (at least 2 on the faculty level)

Members are expected to be active in

- Naming a NAPLeS liaison person
- Submitting program information for the NAPLeS webpages
- Provide visiting scholar opportunities
- Submitting exemplary syllabi
- Contribute to the webinar series / NAPLeS resources

Teaching the Learning Sciences: an Analysis of 75 Programs

Learning Sciences

- Academic community investigating human learning
- Includes researchers from diverse backgrounds
 - Psychology
 - Sociology
 - Computer science
 - Science & science education
 - ...
- Community with a growing *membership, spreading, and maturity*
- Increasing number of LS degree programs worldwide

Teaching the Learning Sciences: an Analysis of 75 Programs

But what do we know about these programs?

So far, it is unknown ...

- ... what the *disciplinary backgrounds* of LS programs are?
- ... what these programs actually teach?
- ... if there is some homogeneity between the various programs?

Teaching the Learning Sciences: an Analysis of 75 Programs

Research Questions

1. Which *disciplines* are involved in teaching the Learning Sciences?
2. What are the *core concepts* taught in Learning Sciences programs?
3. What are the *core methods* taught in Learning Sciences programs?
4. Can we identify a core of *more homogeneous* Learning Sciences programs?

Teaching the Learning Sciences: an Analysis of 75 Programs

Method

Document analysis (Bowen, 2009)

- Website contents of international graduate LS programs
- Qualitative content analysis (Mayring, 2001, 2014)

Inclusion criteria

- English online presentation
- Self-identification as Learning Sciences operationalized by:
Learning Sciences, Learning Science, or Sciences of Learning

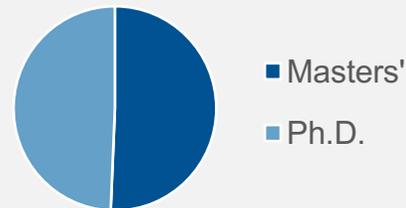
→ Differentiation of programs identifying/not identifying as LS is crucial to make inferences about *LS programs*

Teaching the Learning Sciences: an Analysis of 75 Programs

Sample

75 Learning Sciences programs

- 51% Master's programs ($N = 38$)
- 49% Ph.D. programs ($N = 37$)

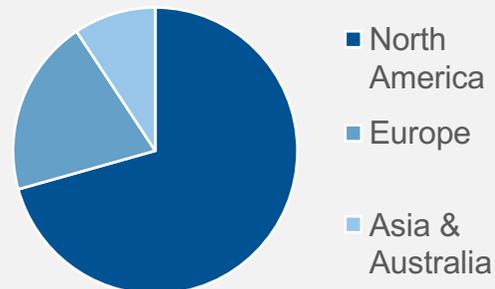


NAPLeS membership

- 57% ($N = 43$)

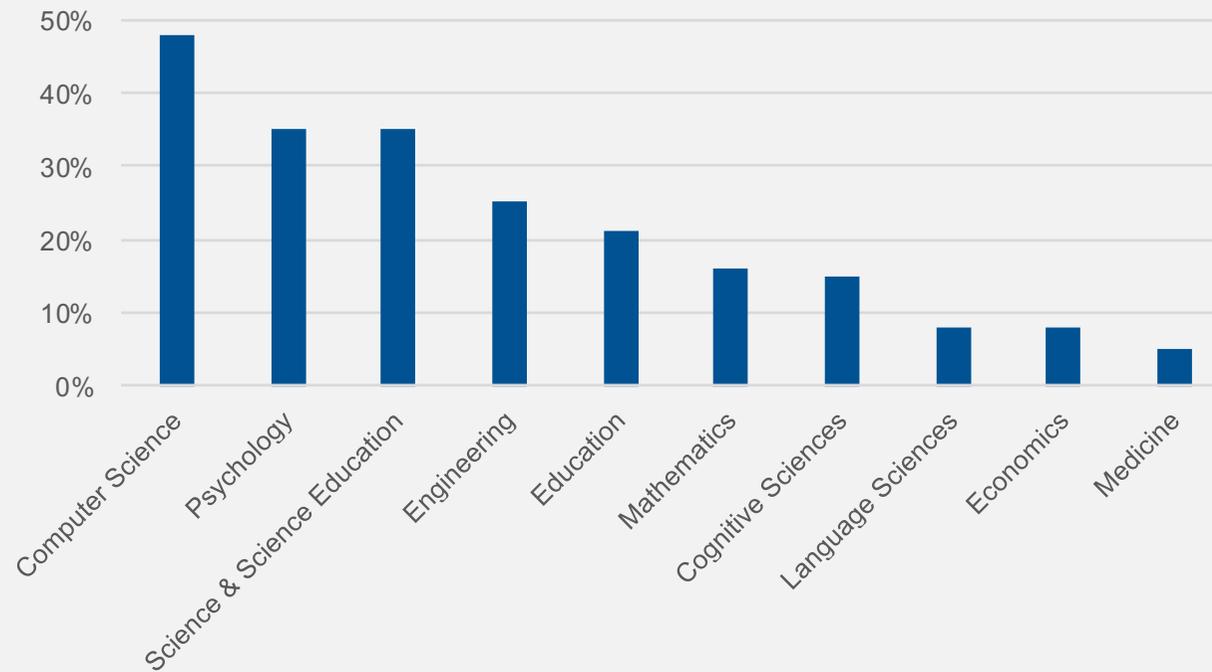
Regional distribution

- North America 71% ($N = 53$)
- Europe 20% ($N = 15$)
- Asia and Australia 9% ($N = 7$)



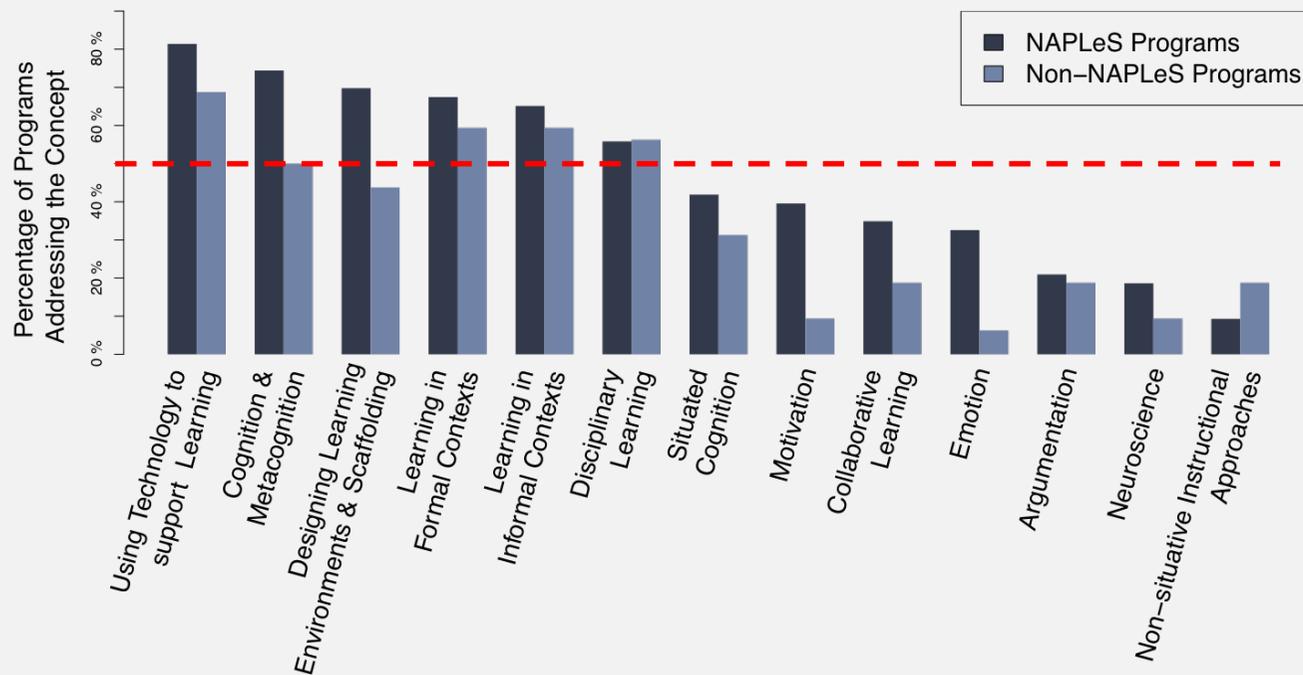
Teaching the Learning Sciences: an Analysis of 75 Programs

Results – Top 10 Involved Disciplines



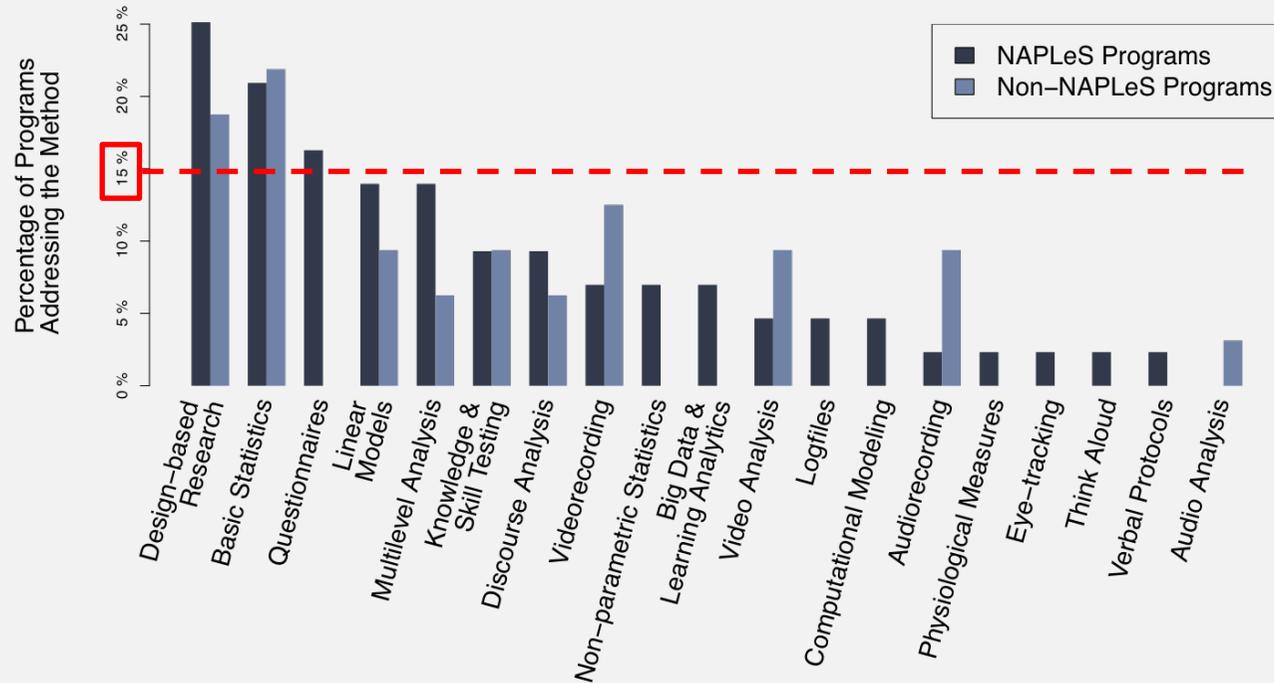
Teaching the Learning Sciences: an Analysis of 75 Programs

Results – Core Concepts



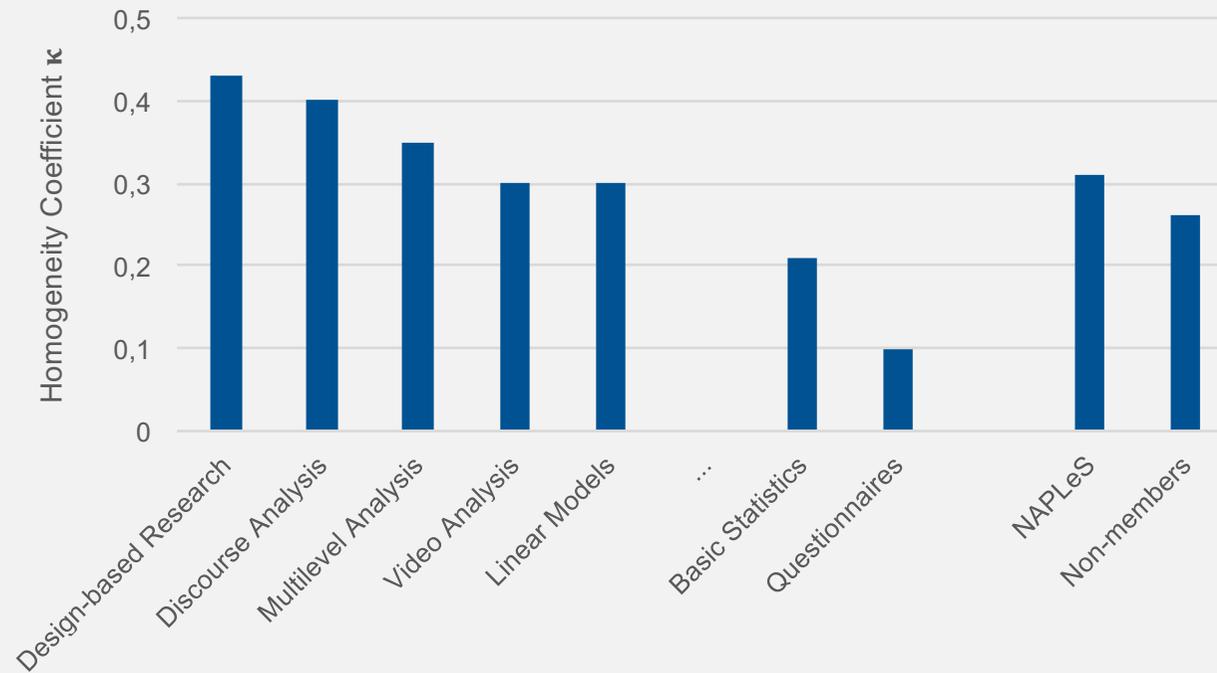
Teaching the Learning Sciences: an Analysis of 75 Programs

Results – Core Methods



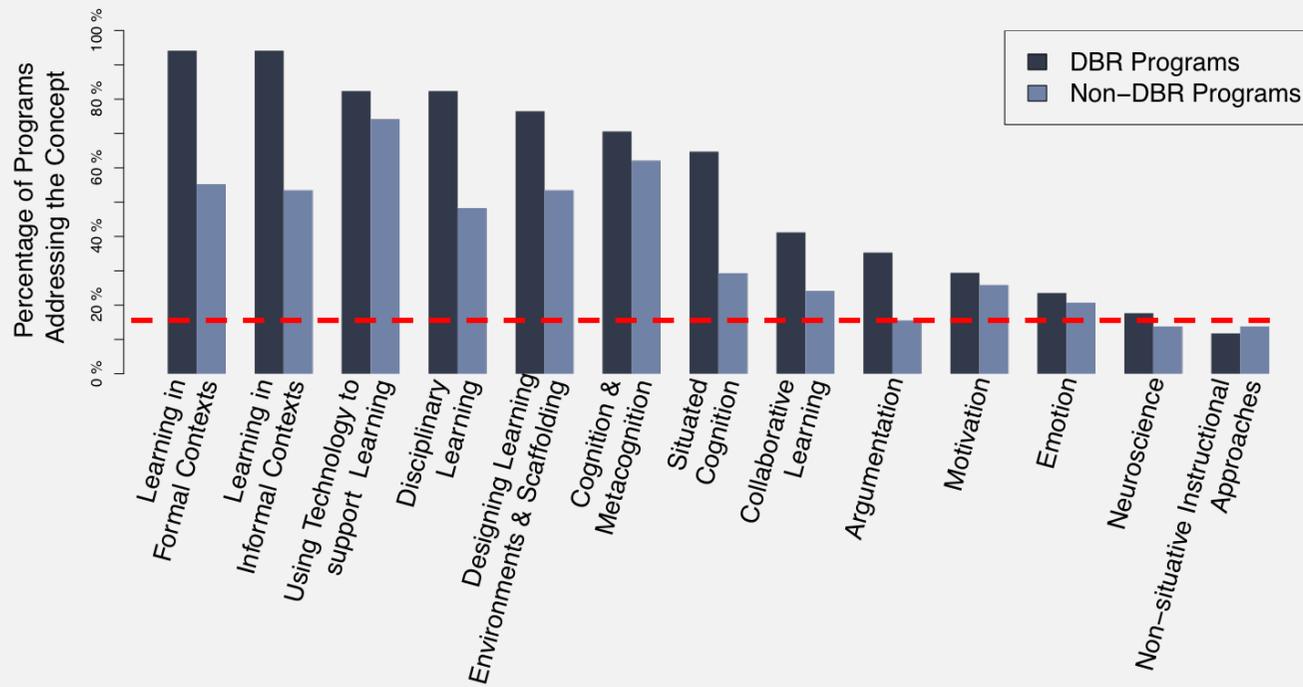
Teaching the Learning Sciences: an Analysis of 75 Programs

Results – Homogeneity



Teaching the Learning Sciences: an Analysis of 75 Programs

Results – Core Concepts in DBR Programs



Teaching the Learning Sciences: an Analysis of 75 Programs

Discussion

Study provides empirical data

- LS programs include several disciplines
- Several conceptual and methodological cores can be identified

Important Features of Learning Sciences

- Design-based research constitutes a signature method
- NAPLeS programs are somewhat more homogeneous than other LS programs

The Learning Sciences as a growing and changing community

- Core themes, but also a variety of concepts and methods from other disciplines

→ *We argue, that this is an indication of a productive scientific community*

Teaching the Learning Sciences: an Analysis of 75 Programs

Discussion

The results on concepts & methods

Only *partially* match other conceptions of LS (Packer & Maddox, 2016), especially regarding research foci (Yoon & Hmelo-Silver, 2017).

→ Possibly a gap between current *research* and *teaching*

First empirical data that LS degree programs

- show a high conceptual diversity and
- even higher methodological diversity.

Design-based research

- is the most frequently mentioned method (< 25% of programs)
- and programs teaching it show the highest homogeneity, possibly representing the core of the learning sciences Community of Practice



International Society of
the Learning Sciences

You want to learn more? Watch out for our upcoming publication:

Sommerhoff, D., et al., (2018). What do we teach when we teach the Learning Sciences? A document analysis of 75 graduate programs. *Journal of the Learning Sciences*, 27(2)

or send me an E-Mail.

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