American Association of Colleges of Nursing

Enhancing Nursing Science and Improving Patient Care through Big Data: PhD-DNP

Doctoral Conference
January 23, 2016
Orlando, FL

University of Minnesota School of Nursing Driven to Discover℠

Enhancing Nursing Science and Improving Patient Care through Big Data: PhD-DNP

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Enhancing Nursing Science and Improving Patient Care through Big Data: PhD-DNP

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Nursing's Leadership

- Transform our health care system
- Extraordinary possibilities for nursing
- Era of big data, massive databases of health information
  - electronic health records systems
  - health repositories
  - genomics resources
  - mobile computing
  - social media archives
- Power of predictive and visualization analytics to:
  - ascertain patterns & trends
  - provide evidence that will guide patient care & care management, risk management, patient satisfaction, and decision support
- Support solutions for practice, scholarship, and management
- Effective stewardship and socially responsible engagement
- Context of polarity and partnerships.

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Future Work Skills 2020

1 Sense-making
2 Social intelligence
3 Novel & adaptive thinking
4 Cross -cultural competency
5 Computational thinking

Definition: ***ability to translate vast amounts of data into abstract concepts and to understand data-based reasoning***

2020 Workforce Skills http://www.iftf.org/uploads/media/SR-1382A_UPRI_future_work_skills_sm.pdf

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Future Work Skills 2020

6 New-media literacy

Definition: *ability to critically assess and develop content that uses new media forms, and to leverage these media for persuasive communication*

7 Transdisciplinarity

Definition: *literacy in and ability to understand concepts across multiple disciplines*

8 Design mindset

Definition: *ability to represent and develop tasks and work processes for desired outcomes*

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Future Work Skills 2020

9 Cognitive load management

Definition: *ability to discriminate and filter information for importance, and to understand how to maximize cognitive functioning using a variety of tools and techniques*

10 Virtual collaboration

Definition: *ability to work productively, drive engagement, and demonstrate presence as a member of a virtual team.*

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Enhancing Nursing Science and Improving Patient Care through Big Data: PhD-DNP

Objectives

Describe collegiate/institutional setting.
Describe complement of PhD and DNP faculty (T/TT & Clinical).
Discuss PhD and DNP faculty research/scholarship exemplars, including big data/science.
Discuss opportunities and challenges of PhD-DNP research, including big data, building capacity, and collaboration. .
"Team commonalities"

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U of Minnesota

University: Public land grant, 5 campus system, Enrollment ~65,000, AHC (Nursing, Medicine, Pharmacy, Dental, Vet Med, Public Health)

School of Nursing:

950 students, 348 – DNP, 41- PhD, DNP - 13 specialties

82 FT Faculty: 42 T/TT, 41 Clinical; 79 doctorally prepared; 18 Clinical Fac hold PhDs

Shared governance, all faculty contribute to hiring decisions, promotion guidelines for all

M Health Nursing Collaboratory

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U of Minnesota

Big Data Environment

CTSA – 2.5 M EHR CDR; Focus on multi-site Extended (Nsg) Clinical Data
PCORI – 10 site
Population Health Center – Social determinants of Health
Optum Labs
Home Health Data Repository – National, intnl
Big Data Conference (4th annual June '16) – 12 project teams

http://www.nursing.umn.edu/icnp/center-projects/big-data/index.html

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- Exemplar: Extended Data Project
  - Beverly Christie as co-PI and Anne LaFlamme - both DNP graduates
  - Grace Gao is a DNP graduate and now is a PhD student
  - Publications and presentations include both the DNP/ PHD, and health informatics students and faculty
- Exemplar: Design/Test/Implement Interprofessional National Clinical Data Repository

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The University of Iowa | Emory | UF College of Nursing University of Florida