



think EDUCATION RESEARCH tank

RESULTS REPORT BY
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Topic lists have no prioritization. They are simply lists of concepts or examples that attendees shared during the event on Sept. 29, 2023.

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ABSTRACT

As Dr. Bayles began his tenure at UNMC as the Vice Chancellor for Research, we engaged him in some dialogue about education research by inviting him to a UNMC Education Research Network meeting. A formal meeting with Dr. Ken Bayles and Dr. Pam Boyers followed on May 11, 2023, discussing education research at UNMC.

After that discussion, Dr. Priscilla Rodrigues-Armijo and Dr. Beth Beam began a process to engage interested UNMC faculty and staff to get a pulse on the state of the science of teaching and learning on our many campuses. A date for an Education Research Think Tank was set on the afternoon of Sept. 29, 2023. The event was broadly shared with campus-wide educators and Interprofessional Academy of Educators members.

The Think Tank event elements included collecting a “single point in time” list of educational research areas at UNMC, creating a list of research resources used by our investigators, and conducting a Strengths, Weaknesses, Opportunities and Threats (SWOT) analysis as we think about the future of educational research at UNMC. The event was held live in Omaha with Zoom connectivity to any other campuses of UNMC. The Zoom whiteboard system was used to collect the list of educational research areas and resources effectively. Dr. Armijo-Rodrigues facilitated the SWOT analysis discussion among tables in the room and with Zoom attendees. The report was sent out to all invitees for member checking and feedback.

This document describes the event outcomes with that global review. Two key next steps should include a “seat at the table” for education in research at UNMC as well as a “bulletin board” for education research projects and opportunities. Bootcamps and/or workshops are also under consideration.

IMAGES

Note: Images are provided for record of technology used; details of findings will follow in report.

Image1. Example of Think Tank Mind Map Whiteboard in Zoom

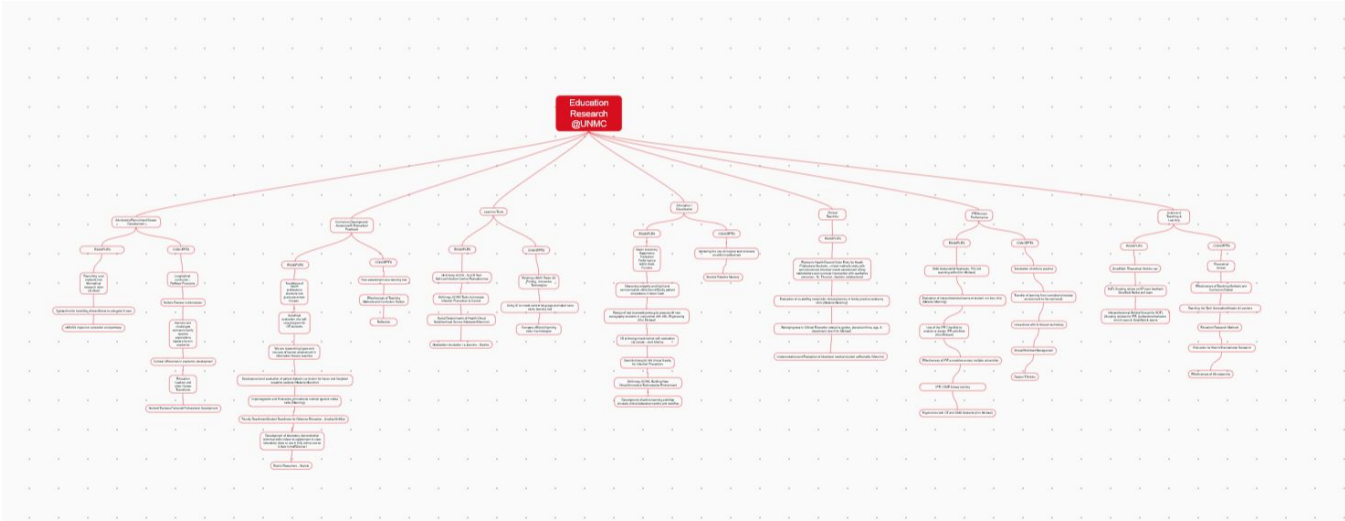
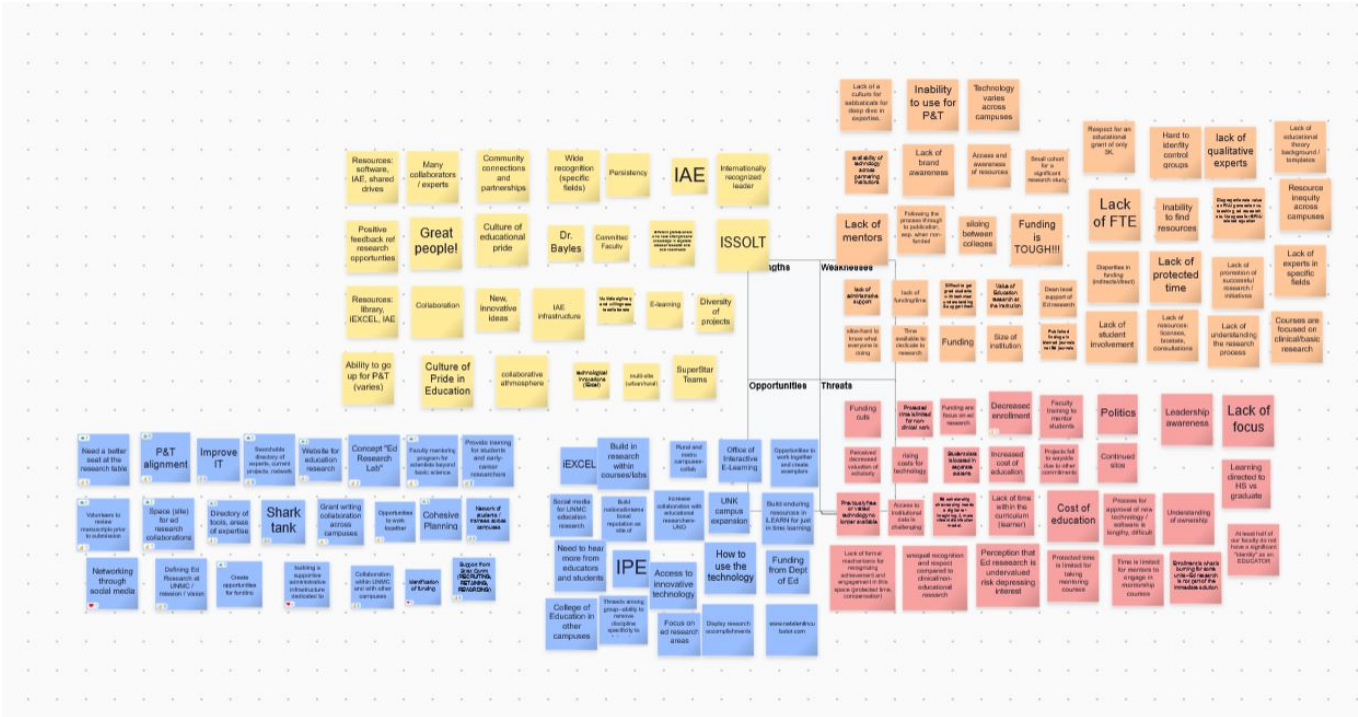


Image 2. Example of Think Tank Research Partners Whiteboard in Zoom



Image 3. Example of Think Tank SWOT Analysis Whiteboard in Zoom



AREAS of Education Research at UNMC

Admissions/Recruitment/Career Development

CONCEPTS	EXAMPLES
Longitudinal curriculum – Pathway Programs	Recruiting rural students into biomedical research roles (<i>Mott</i>)
Holistic review in admissions	Onboarding for transition of practitioner to educator (<i>Krusen</i>)
Barriers and challenges women/minority/special populations leaders face in academia	uBEATS impact on education and pathways
Cultural differences in academic development	HRSA Grant for Veterans in Nursing Training (<i>LaFramboise</i>)
Education leaders & other career transitions	HRSA grant for burnout, recruitment & retention of nurses (<i>Hanish</i>)
Student/Trainees Personal & Professional Development	

Curriculum Development: Assessment, Evaluation, & Feedback

Concepts	Examples
Peer assessment as a learning tool	Transitions of health professions students into graduate school (<i>Krusen</i>)
Effectiveness of teaching methods and curriculum design	Evaluation of a self-care program for Occupational Therapy students (<i>Smallfield</i>)
Reflection	We are researching types and success of learner assessment in information literacy teaching
Competency assessment	Development and evaluation of patient diabetic curriculum for Karen and Kanjobal speaking patients (<i>Menning</i>)
	Implementation and Evaluation of binational medical student coffee talks (<i>Menning</i>)
	Faculty Readiness/Student Readiness for Distance Education (<i>McMillan</i>)
	Development of laboratory demonstration technical skills videos to supplement in-class laboratory class or use in fully online course (<i>Imhoff/Donner</i>)
	Rubric Repository (<i>Steinke</i>)

Clinical Teaching

EXAMPLES
Electronic Health Record Order Entry for Health Professions Students – mixed methods study with semi-structured interview needs assessment of key stakeholders and curricular intervention with qualitative outcomes (<i>Fingeret</i>) Seeking collaborators!
Evaluation of co-staffing model with clinical pharmacy in family practice residency clinic (<i>Menning</i>)
Belongingness in Clinical Education related to gender, placement time, age, & department size (<i>K. Michael</i>)
Implementation and Evaluation of binational medical student coffee talks (<i>Menning</i>)
Belongingness among student nurses in clinical settings (<i>Carithers, Stamler, Ofe Fleck</i>)

Human Performance

CONCEPTS	EXAMPLES
Translation of skills to practice	IPE / GME airway training
Transfer of learning from controlled simulated environment to the real world.	Ergonomics with OT and DMS Students (<i>K. Michael</i>)
Interactions with & through technology	
Stress/workload management	
Design Thinking	

Interprofessional Education (IPE)

EXAMPLES
DMS students/IM residents. Point of care ultrasound scanning skills (<i>K. Michael</i>)
Evaluation of interprofessional teams at student run free clinic (<i>Menning</i>)
Use of the IPE Checklist to evaluate or design IPE activities (<i>K. Michael</i>)
Effectiveness of IPE e-modules across multiple universities

Science of Teaching & Learning (SoTL)

CONCEPTS	EXAMPLES
Theoretical lenses	Theoretical Thinking Cap (<i>Smallfield</i>)
Effectiveness of teaching methods and curriculum design	SoTL scoping review on Standardized Patient peer feedback (<i>Smallfield, Balliet, & team</i>)
Teaching the technology generation/needs of learners	Interprofessional Writing Groups for SoTL i.e. Scoping reviews for IPE; professional behavior; simulation (<i>Krusen, Smallfield & new teams</i>)
Education research methods	Determination of student critical thinking and strategies to improve critical thinking skill (<i>LaFramboise, Stamler, Hultquist, Kupzyk</i>).
Education for bench/translational research	
Effectiveness of microlearning	

Simulation/Visualization/AI/Learning Tools

CONCEPTS	EXAMPLES
Validating the use of medical task simulator on skills improvement	Beam Improving Respiratory Protection Performance NSRI IRAD Funding
Student relative mastery	Measuring empathy and high-level communication skills from difficulty patient simulations (Cook)
Existing UNMC tools: 3d printing, immersive technologies	Design of tool to assess probe grip pressure of new sonography students in conjunction with UNL Engineering (K. Michael)
Using AI to create natural language prompted case study learning tool	3D printed gynecological task trainer with evaluation via survey (Monico)
Compare different learning tools/technologies	GCHS Virtual Reality for Infection Prevention (McKinney)
	GCHS- Building New Virtual/Immersive Technologies Environment (McKinney)
	Development of online learning activities simulate clinical laboratory testing and workflow (Imhoff/Donner)
	GCHS - SLICE Tool: Self-Led Infection Control Evaluation tool (McKinney)
	GCHS Tools to innovate Infection Prevention & Control (McKinney)
	Social Determinants of Health Virtual Neighborhood Survey (Nabower/Menning)
	Metabolism simulation/e-learning (Steinke)

RESEARCH RESOURCES

Education Research Resources

NU	Great Plains IDeA-CTR
NU	Nebraska VR Network for Education & Research (NeVRNER)
UNL	Child, Youth & Family Studies department
UNL	College of Engineering Senior Design Capstone Program
UNL	Educational Psychology department
UNL	Institute of Agriculture and Natural Resources (IANR)
UNL	Johnny Carson Center for Emerging Media Arts
UNL	Nebraska Academy for Methodology, Analytics & Psychometrics (MAP Academy)
UNL	Nebraska Evaluation and Research (NEAR) Center
UNL	Teaching, Learning & Teacher Education department
UNMC	Center for Collaboration on Research Design and Analysis (CCORDA)
UNMC	Center for Intelligent Healthcare
UNMC	Center for Sustainment of Trauma and Readiness Skills (C-STARS)
UNMC	Child Health Research Institute (CHRI)
UNMC	iEXCEL Specialists / Technology / Ed Researcher / Visual Design Team
UNMC	Innovation Design Unit
UNMC	Institutional Review Board
UNMC	Instructional Designers
UNMC	Interprofessional Academy or Educators (IAE)
UNMC	Leon S. McGoogan Health Sciences Library
UNMC	Munroe-Meyer Institute (MMI)
UNMC	Office of Interactive E-Learning
UNMC/UNO	UNeTech Institute

Education Research Tools

Course Management & Module Development	Canvas, Exxat, Storyline 360
Data Collection Software	ExamSoft, Microsoft Office Forms, REDCap, Qualtrics
Intervention Delivery & Data Collection	Echo 360 analytics
Intervention Delivery & Data Collection	E-Learning Modules
Learning Analytics Software	Watershed LRS
Library/Reference Software	Covidence (Scoping Reviews), EndNote, Zotero
Meeting Software	Zoom, Microsoft Teams, Avatour
Publication Software	BePress
Qualitative Data Analysis Software	MaxQDA (includes mixed methods), Nvivo
Quantitative Analysis Software	SPSS
Video Hardware	360 Camera Companies
Virtual Reality Software	SimX
Virtual Reality Software	Zspace

Education Research Collaborators

Corporate Entities	Echo360 Company (Grant Funding and Collaborators)
Government Agencies	Centers for Disease Control
Heath Care Centers	Nebraska Medicine, Massachusetts General Hospital
Higher Education	Accreditation Agencies, Emory University, Tulane University, University of Anahauc Veracruz (language center), University of North Carolina, University of Ohio, Yale University
Local	Clinical Faculty, Local Consultants in Immersive Tech
Non-Profits	Color Purple (cultural humility evaluation), OneWorld, World Health Organization
Professional Societies	American Medical College Application Service (data request)
	Association of American Medical Colleges (data request)
	Association of American Medical Colleges sub-groups (Central Group on Education Affairs, Group on Faculty Affairs, Group on Information Resource, Group on Women in Medicine and Science)
	Association of Pediatric Program Directors LEARN
	Council on Medical Student Education in Pediatrics
	International Society for the Scholarship of Teaching and Learning
	Profession Specific Organizations
UNMC	Global Center for Health Security Network

OPPORTUNITIES & THREATS

from SWOT Analysis

EXECUTIVE SUMMARY:

Participants noted “having a seat at the table” in discussion and voting, along with leadership buy-in and support. It is a strength that our current leadership supports us, but there is a lack of voice and visibility across campuses, colleges and institutes. In terms of opportunities, we could explore having a dedicated site and/or website for education research, along with establishing a direct line to leadership.

COMMON THEMES:

Funding/Resources

When funding and resources are available, they are a strength (IAE, iEXCEL, e-Learning); when they are not available, they are a weakness. In general, lack of funding/release time is an issue. There is an opportunity to provide support to educational researchers to identify external funding and create more internal funding mechanisms.

Respect/Value

When educational research is respected and valued it is a strength; when it is not, it is a weakness. In general, educational research is not seen as valued (I don’t think the metric should be “as much as clinical”) and there are frustrations that this work doesn’t “count” towards promotion. There is an opportunity to make educational research more visible on campus and make explicit P&T guidelines that include it. It may be helpful to define what “educational research” is.

Connection/Collaboration

Feeling connected with other educational researchers and collaborating is a strength; it is a weakness that it is not easy to connect with others. There is an opportunity to develop a platform that would help educational researchers connect with each other, and it may also help add to the respect/value of educational research projects on campus.

Technology

Having research tools/software is a strength, but setting up access to new software or accessing certain software (e.g. Qualtrics) is a weakness. Clarifying the process to get new software, negotiating larger-scale software purchases, and making it easier to access institutional data are opportunities.

Training/Mentoring

Having training and mentoring available for educational researchers is a strength; the scarcity of it is a weakness. There is an opportunity to provide more training and mentoring opportunities for educational researchers.

Note: Common Themes summarized by Dr. Michelle Howell, PhD

FOLLOW-UP COMMENTS

from the Member Checking Process

Interesting comments included:

- Consider bootcamps or focused extended programs to go deeper on SoTL research techniques (qualitative research, methods, etc.).
- If there was a two-week bootcamp or longer fellowship where you really were focusing on research methods in a singular way to build up your skill set, that would be great. I think there is a need.

Learn more and find collaborators at:
go.unmc.edu/ed-research-network