



WASHINGTON STATE
UNIVERSITY



EVALUATION OF CYSER PROGRAMS

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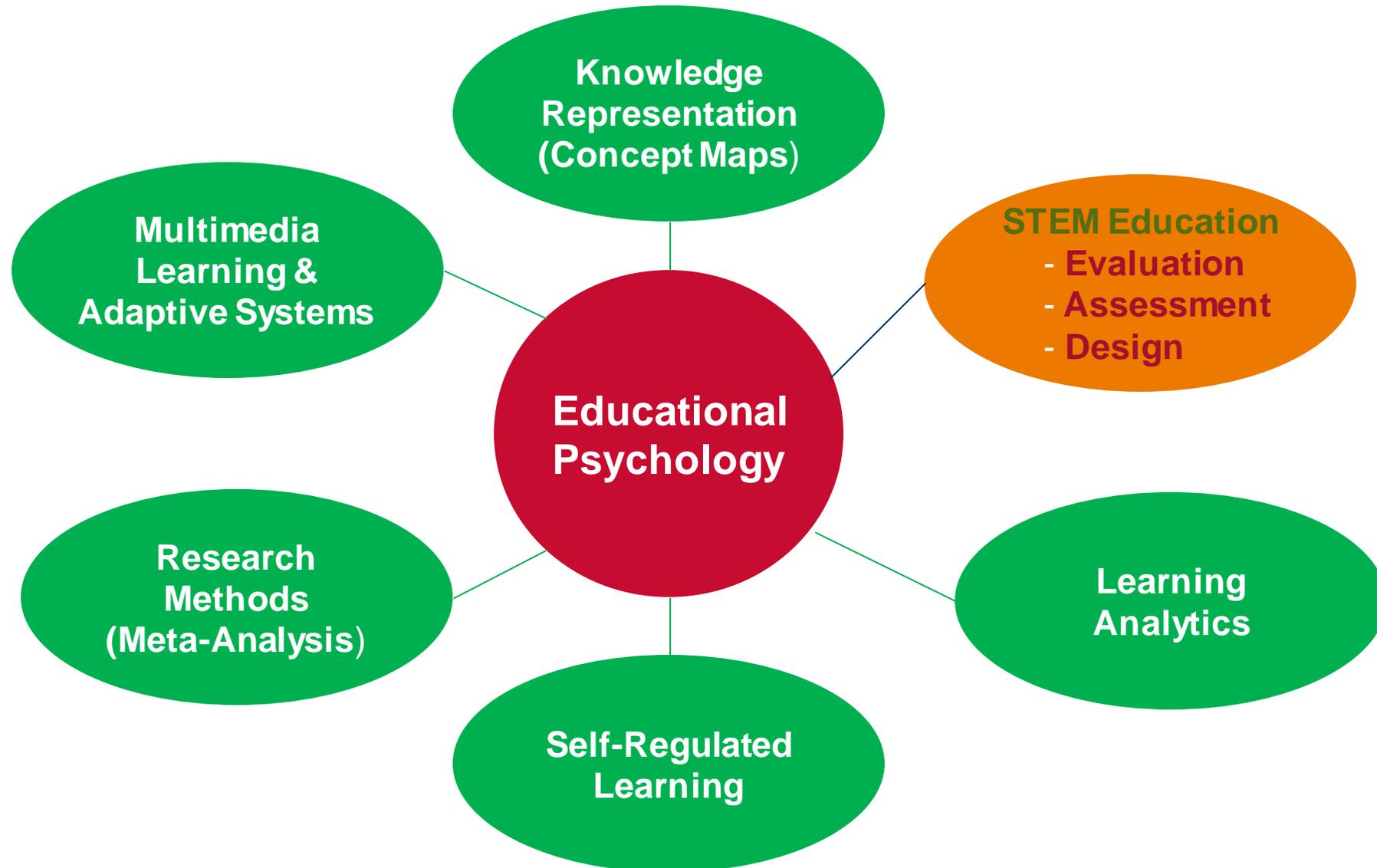
Evaluation Profile



- **Independent, rigorous evaluation of project activities to guide implementation.**
- Our Center is staffed with faculty members, research associates and graduate students who are highly qualified and **have extensive experience working as external evaluators on numerous projects funded by NSF, the U.S. Department of Education, USDA, DOD and state and local educational agencies.**



My Interests

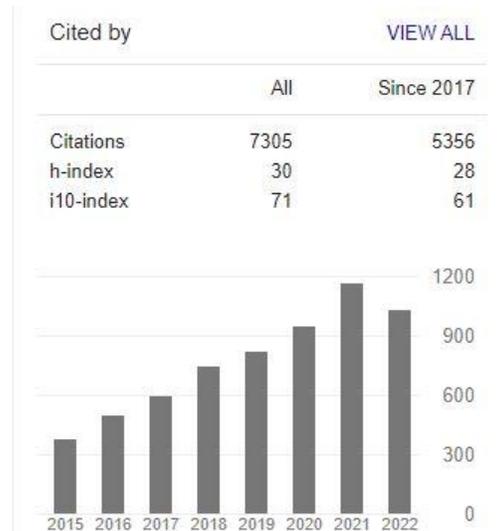




Publication Profile



- **~150 peer-reviewed publications**
 - 70 journal papers mostly in top 3 journals in education and STEM education
 - 60 peer-reviewed proceedings, mostly STEM
 - 3 Books
 - 11 Book chapters
 - Papers have been cited 7,305 times by other papers in different fields including engineering, sciences, and nursing.
- **107 peer-reviewed presentations at international and national conferences**





EVALUATION DATA POINTS

- Attended bi-weekly meetings with investigators to discuss project goals + Frequent meetings with PI and staff.
- Attended bi-weekly seminars.
- Attended summer workshops.
- Administered survey and analyzed data from summer workshop and seminar.
- Provide formative evaluations and feedback for programs' continuous development and improvement.

CYSER ACCOMPLISHMENTS

1

Three New Cybersecurity courses developed and offered

2

Three Certificate Programs Developed & 2 Approved

3

Bi-weekly Virtual Seminar Series Led by a Mix of Experts from Industry & Academia

4

A 2-Week Intensive Summer Workshop in 2022

5

27 UG students/ROTC members and 7 G mentors involved in CySER. 14 offered

- internships, URM's**
- **A new website for broader dissemination**
 - **A new Cybersecurity Student Club**
 - **Club members engage in cyber competitions**

6



SUMMER WORKSHOP EVALUATION

How much did you learn...?

About 90.2% indicated that they learned a lot/a great deal from attending the workshop.

Overall, open-ended responses as well as Likert type responses show that the workshop was effective, and beneficial in enhancing learners' experience in cybersecurity education and research.

Learning about Cybersecurity

Most respondents (~ 89%) indicated that they learned a lot/a great deal on different topics ranging from

Team building & leadership, A day-in-the-life of a cybersecurity professional; Army cyber command; Common vulnerabilities; Cybersecurity and military applications; CyberHawks, Competitions, Outreach; Power grid and cybersecurity; Applications of machine learning to cybersecurity; etc.



IMPROVEMENTS TO FUTURE WORKSHOPS



- Introduce **more team building and hands-on learning activities** or techniques of Cybersecurity concepts
- Introduce **more career talks in Cybersecurity** to encourage prospective students' interests in Cybersecurity.
- Encourage **more sessions on undergraduate and graduate research in cybersecurity and resource optimization.**
- More of the sessions were too advanced. Hence, there is a need to provide adequate information on the **basics of Cybersecurity for all participants.**





WHAT WENT WELL IN YEAR 1



- Participants responded that **several aspects of the project went well in the first year**. These include the cybersecurity seminar series, the summer workshops, PI-team meetings, onboarding ROTC and civilian undergraduates, involving graduate mentors
- Many of the respondents noted that the blend of speakers from different aspects of cybersecurity, private industries, government, military and academia provided **a rich set of facilitators for the biweekly seminars and the summer workshops** and encouraged continuation of such blending in the future.



NEEDS IMPROVEMENT...

- Improved communication between GI and among partner institutions → clear directions about process
- Need to involve advisory board members
- Advance recruitment drives, manage internship opportunities and certification process
- Need more graduate mentors
- More time and resources to enhance project coordination
- Commensurate compensation for all stakeholders, especially the PIs.



Looking Ahead...

Sustainability Matters

THANKS + QUESTIONS



Please contact me



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