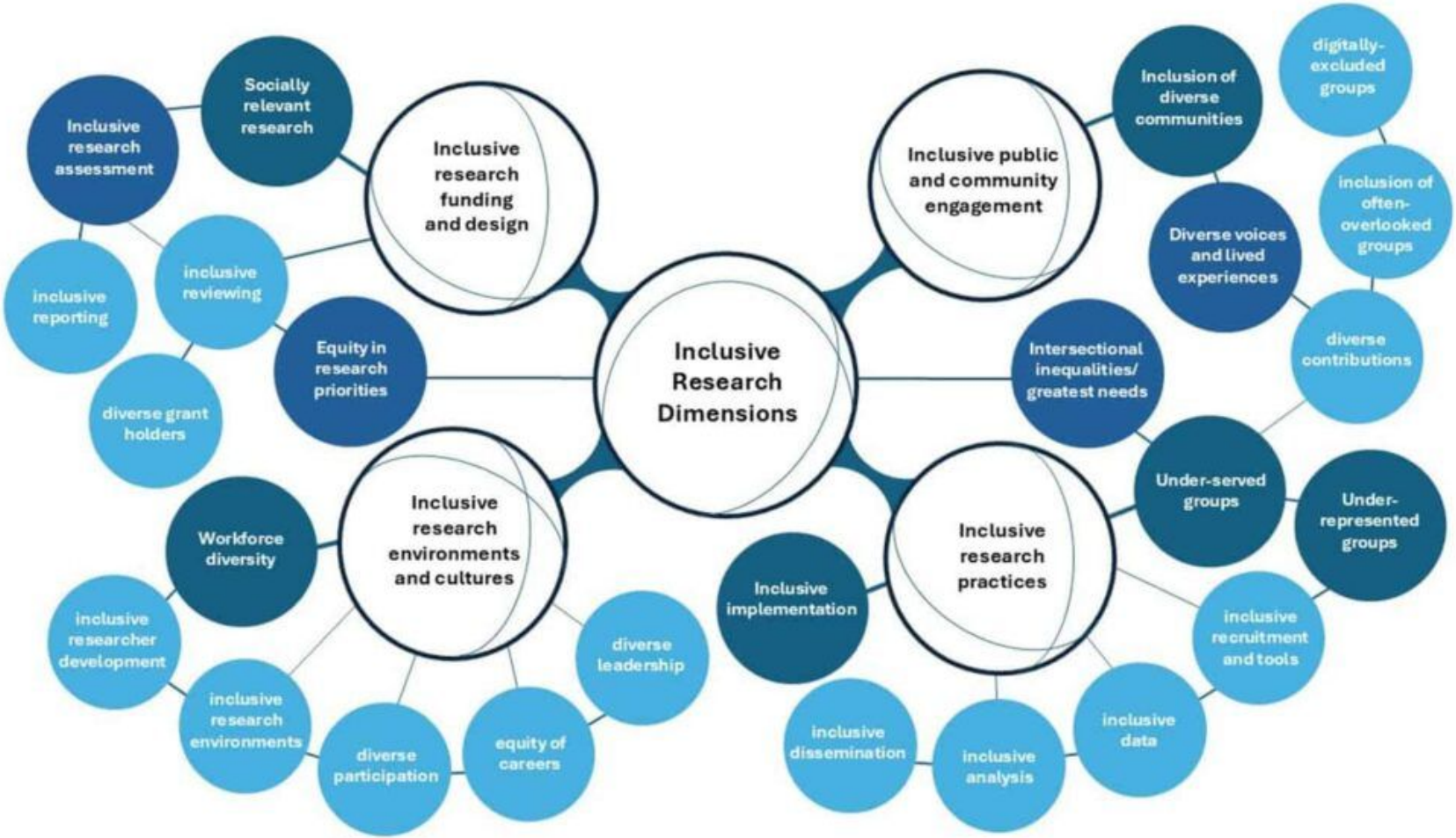
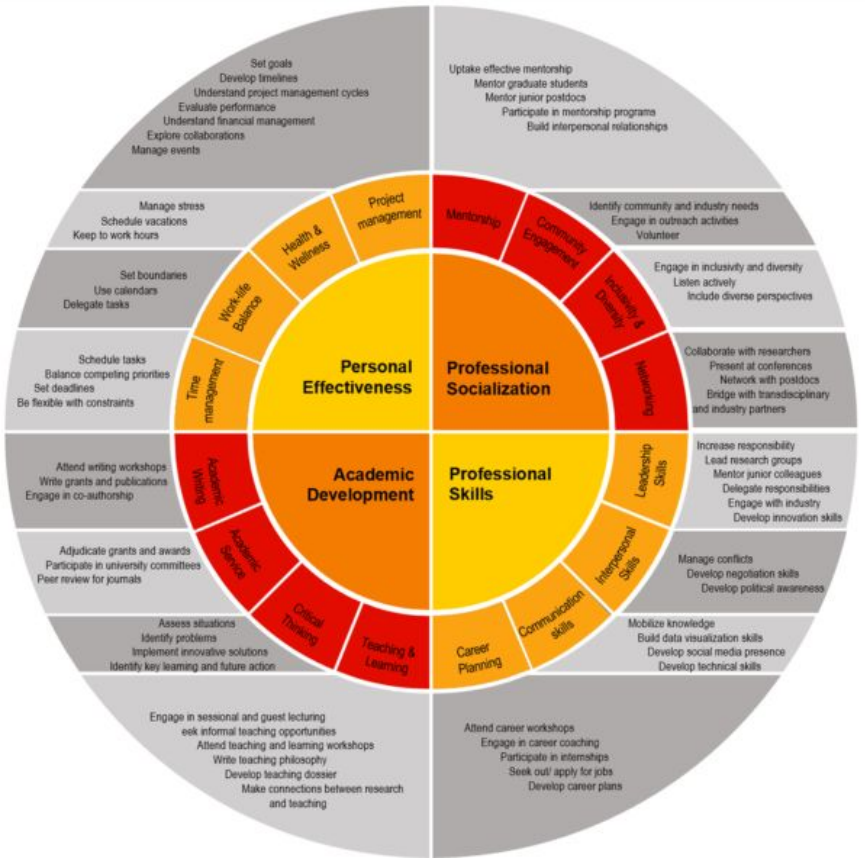


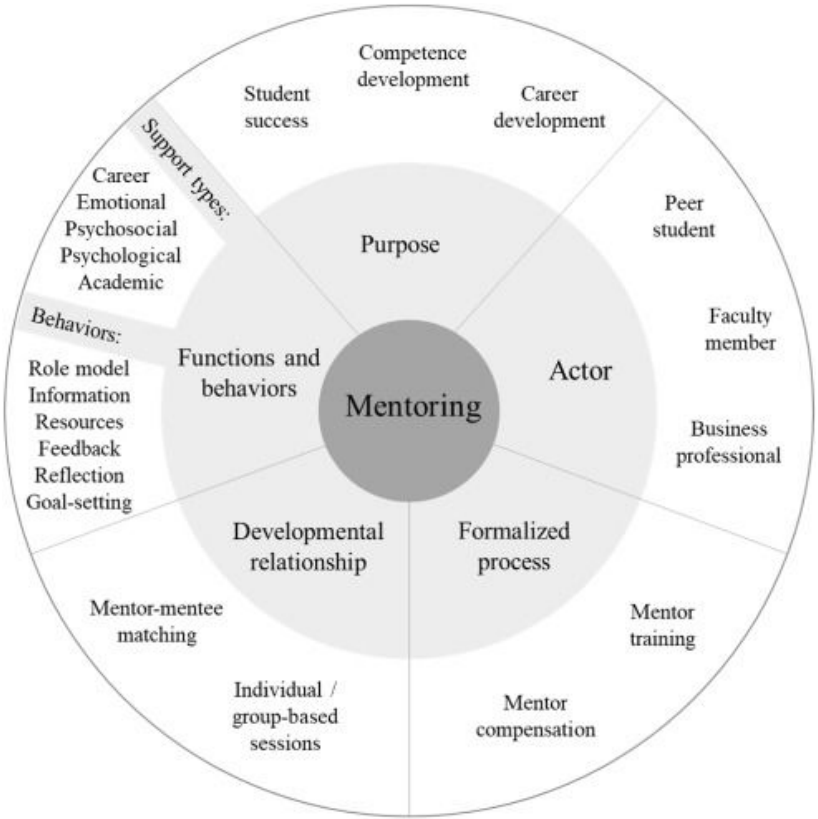
https://www.hepi.ac.uk/2025/03/05/building-inclusive-research-cultures-how-can-we-rise-above-edi-cynicism/

https://warwick.ac.uk/fac/sci/med/research/culture/

Frameworks for mentorship



Nowell, 2021 https://doi.org/10.1108/SGPE-10-2020-0067



Wendy Nuis, at al Conceptualizing mentoring in higher education: A systematic literature review, Educational Research Review, 2023, https://doi.org/10.1016/j.edurev.2023.100565.

Table 1: Researcher Skill Development Framework

A conceptual framework for the explicit, coherent, incremental and cyclic development of the skills associated with researching.

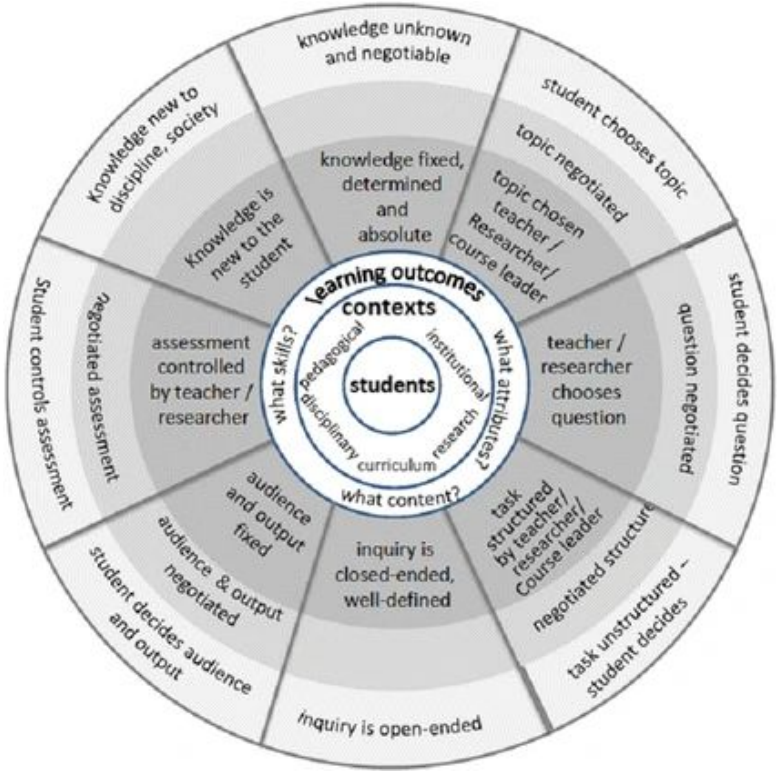
www.rsd.edu.au
john.willison@adelaide.edu.au

← supervisor instigated ←→ researcher instigated ←→ discipline leading →

Researchers...	Prescribed Research Level 1 Highly structured directions and modelling from supervisor prompt the researcher(s) to...	Bounded Research Level 2 Boundaries set by and limited directions from supervisor channel the researcher(s) to ...	Scaffolded Research Level 3 Scaffolds placed by supervisor enable the researcher(s) to independently...	Self-initiated Research Level 4 Researcher(s) initiate and supervisor guides.	Open Research Level 5 Researcher(s) determine guidelines that are in accord with discipline or context.	Adopted Research Level 6 Researcher(s) inform others' agendas	Enlarging Research Level 7 Researcher(s) enlarge the field of inquiry.
Facets of Research **a. Embark & Clarify** Respond to or initiate research and clarify or determine what knowledge is required, heeding ethical, cultural, social and team (ECST) considerations. — Curious	Respond to questions/ tasks provided explicitly. Use a provided approach to clarify questions, expectations and ECST issues.	Respond to questions/ tasks implicit in directions. Choose from several provided structures to clarify questions, expectations and ECST issues.	Respond to questions /tasks generated from instructions. Choose from a range of provided structures or approaches to clarify salient elements including ECST issues.	Generate questions/aims/ hypotheses framed within structured guidelines. Anticipate and prepare for ECST issues.	Generate questions/aims/ hypotheses based on experience, expertise and literature. Delve into and prepare for ECST issues.	Identify previously unstated gaps in literature and articulate research directions and ECST issues in response to gaps.	Articulate research directions that expand or direct the field and anticipate the corresponding ECST issues.
b. Find & Generate Find and generate needed information/data using appropriate methodology. — Determined	Collect and record required information or data using a prescribed methodology from a prescribed source in which the information/data is clearly evident.	Collect and record required information/data using a prescribed methodology from prescribed source/s in which the information/ data is not clearly evident.	Collect and record required information/data from self-selected sources using one of several prescribed methodologies.	Collect and record self-determined information/ data, choosing an appropriate methodology based on structured guidelines.	Collect and record self-determined information/ data, choosing or devising an appropriate methodology.	Synthesise others' methods to formulate novel methods/ methodologies or apply existing methods to novel applications.	Generate new methods/methodologies that are used widely.
c. Evaluate & Reflect Determine and critique the degree of credibility of selected sources, information and of data generated. Metacognitively reflect on processes used. — Discerning	Evaluate sources/ information/data using simple prescribed criteria to specify credibility and to reflect on the research process.	Evaluate sources/ information/data using a choice of provided criteria to specify credibility and to reflect on the research process.	Evaluate information/data and inquiry process using criteria related to the aims of the inquiry. Reflect insightfully to improve own processes used.	Evaluate information/data and the inquiry process using self-determined criteria developed within structured guidelines. Refines others' processes.	Evaluate information/data and inquiry process using self-generated criteria based on experience, expertise and the literature. Renews others' processes.	Generate substantial research outcomes, so that ideas, practices or interpretations are cited/implemented by others.	Generate substantial research outcomes, so that ideas, practices or interpretations become foundational in field or discipline.
d. Organise & Manage Organise information and data to reveal patterns and themes, and manage teams and research processes. — Harmonising	Organise information/data using prescribed structure. Manage linear process provided (with pre-specified team roles).	Organise information/data using a choice of given structures. Manage a process which has alternative pathways (and specify team roles).	Organise information/data using recommended structures. Manage self-determined processes (including team function) with multiple pathways.	Organise information/data using self-or-team-determined structures, and manage the processes, within supervisor's parameters.	Organise information/data using self-or-team-determined structures and management of processes.	Form a research team or a team of community-based practitioners.	Form and develop research networks/communities.
e. Analyse & Synthesise Analyse information/data critically and synthesise new knowledge to produce coherent individual/team understandings. — Creative	Interpret given information/data and synthesize knowledge into prescribed formats. *Ask emergent question.*	Interpret several sources of information/ data and synthesise to integrate knowledge into standard formats. *Ask relevant, researchable questions.*	Analyse trends in information/data and synthesises to fully integrate components specified. *Ask rigorous, researchable questions.*	Analyses information/data and synthesizes to fully integrate components, consistent with parameters set. Fill knowledge gaps that are stated by others.	Analyse and create information/data to fill researcher-identified gaps or extend knowledge.	Synthesise others' concepts or interpretations to frame novel outcomes. May also address substantial concerns of a community.	Develop new concepts or interpretations that expand the field or discipline. May also address substantial concerns across communities.
f. Communicate & Apply Discuss, listen, write, present and perform the processes, understandings and applications of the research, and respond to feedback, accounting for ethical, cultural, social and team (ECST) issues. — Constructive	Use prescribed genre to develop and demonstrate understanding from a specified perspective. Apply to a similar context the knowledge developed. Follow prompts on ECST issues.	Use discipline-specific language and prescribed genre to develop under-standing, and demonstrate it to a specified audience. Apply to different contexts the knowledge developed. Clarify ECST issues.	Use discipline-specific language and genres to demonstrate scholarly understanding for a specified audience. Apply the findings to diverse contexts. Specify ECST issues that emerge.	Use appropriate language and genre to address gaps of a self-selected audience. Apply innovatively the knowledge developed to a different context. Probe and specify ECST issues in each relevant context.	Use appropriate language and genre to extend the knowledge of a range of audiences. Apply innovatively the knowledge developed to multiple contexts. Probe and specify ECST issues that emerge broadly.	Change the conversation within the discipline/field through publicly- available communication of knowledge/understanding. Articulate and promote relevant ECST issues.	Change the direction of the conversation across disciplines/ fields. Articulate and promote ECST issues that were previously unstated.

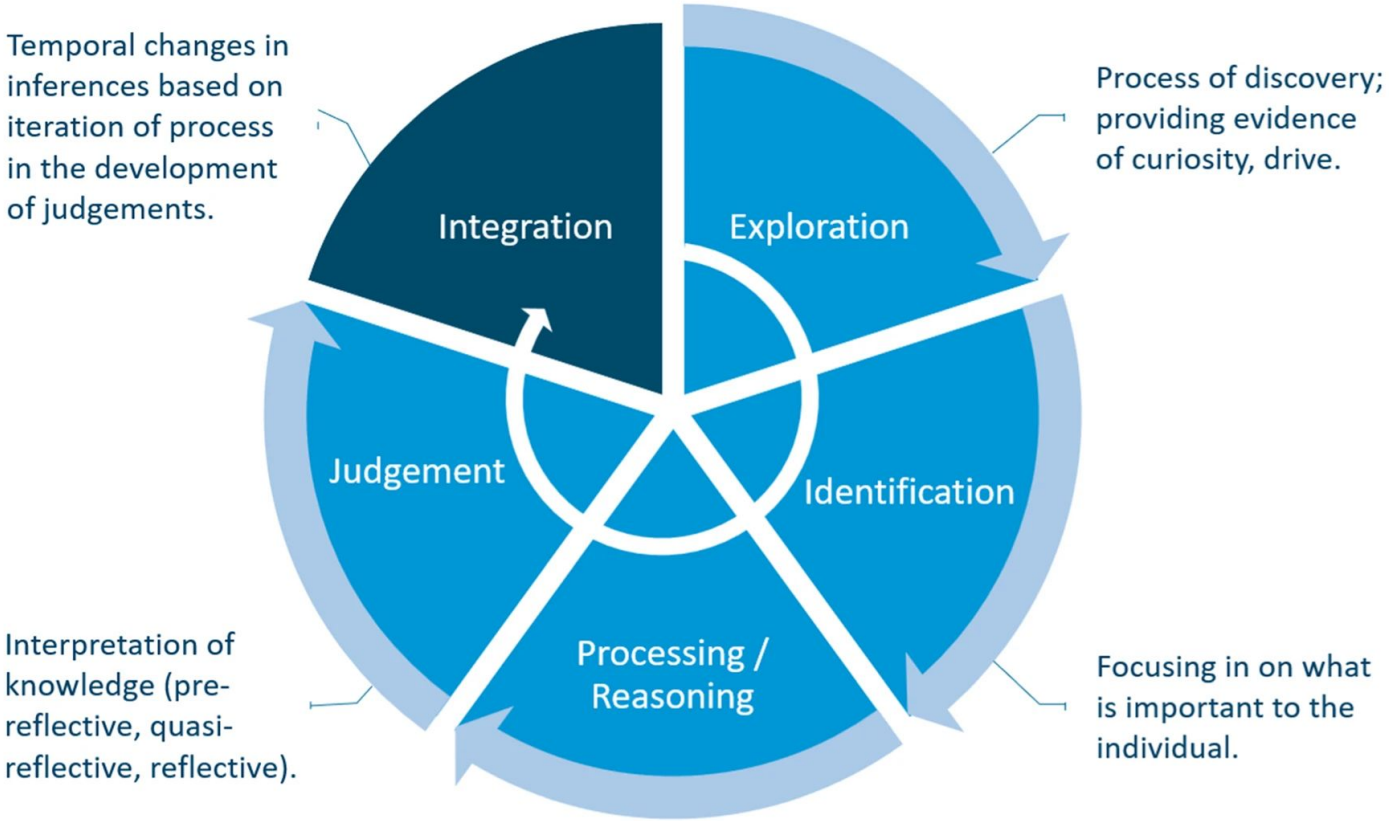
https://www.adelaide.edu.au/melt/university-learning

Framework for UR pedagogy



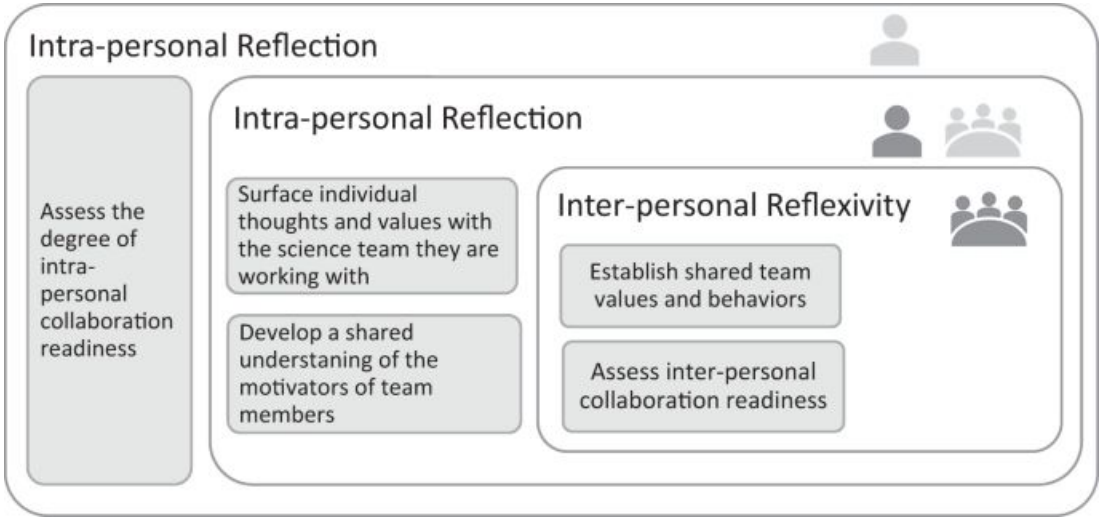
Brew, 2013 https://doi.org/10.1007/s10734-013-9624-x

Learning Model: Reflective Sense-making

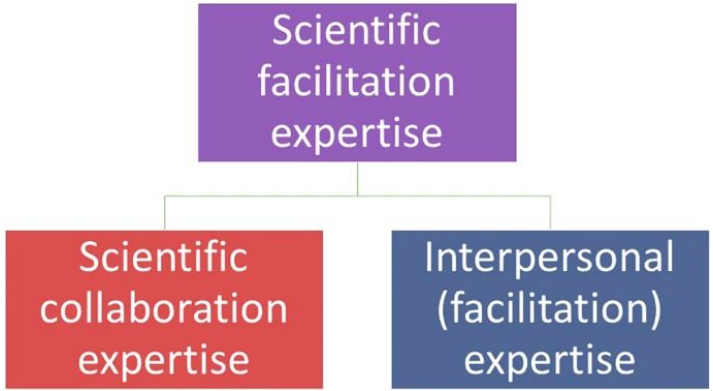


Lotrecchiano, G.R., Bennett, L.M. & Vovides, Y. A framework for developing team science expertise using a reflective-reflexive design method (R2DM). *Humanit Soc Sci Commun* 10, 810 (2023). https://doi.org/10.1057/s41599-023-02298-2

Building Effective Teams

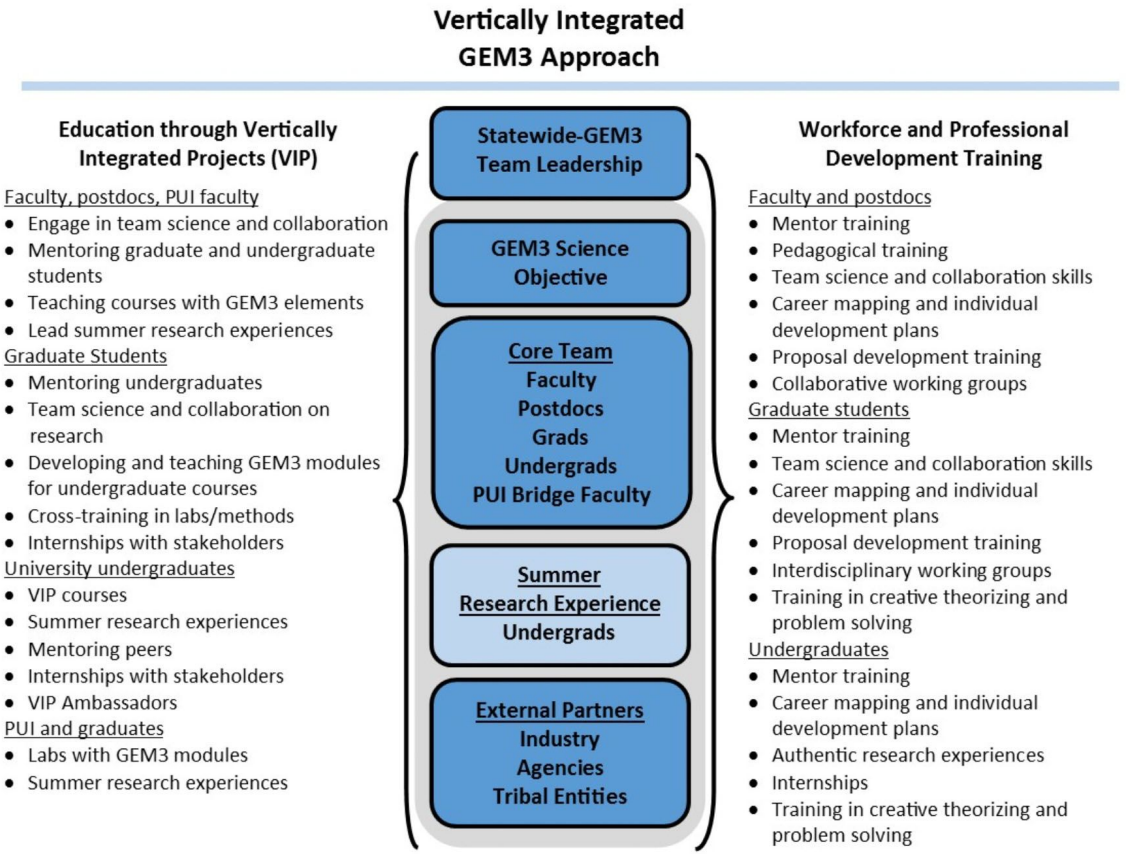


Lotrecchiano, G.R., Bennett, L.M. & Vovides, Y. A framework for developing team science expertise using a reflective-reflexive design method (R2DM). *Humanit Soc Sci Commun* 10, 810 (2023). https://doi.org/10.1057/s41599-023-02298-2



Cravens, A.E., Jones, M.S., Ngai, C. *et al.* Science facilitation: navigating the intersection of intellectual and interpersonal expertise in scientific collaboration. *Humanit Soc Sci Commun* 9, 256 (2022). https://doi.org/10.1057/s41599-022-01217-1

Tiered Mentoring- *toward what end?*



https://www.vip-consortium.org/

Examples:
University of Arizona

Kennesaw State University

https://www.idahogem3.org/vip

NEVADA SYSTEM OF HIGHER EDUCATION

Strategic Planning Framework

Approved by the Board of Regents in February 2023

NSHE Mission Statement

The mission of the NSHE is to provide higher education to the citizens of the state at an excellent level of quality consistent with the state's resources.

It accomplishes this mission by acquiring, transmitting, and preserving knowledge throughout the region, nation, and world.

The System provides an educated and technically skilled citizenry for public service, economic growth and the general welfare contributes to an educated and trained workforce for industry and commerce, facilitates the individual quest for personal fulfillment, and engages in research that advances both theory and practice.

NSHE Vision

One system. Worlds of opportunities.

NSHE Values

In serving the students who come to us for postsecondary education...

1. We strive for **Equity** in access and outcomes for all.
2. We pride ourselves on **Excellence** in our work.
3. We work in **Collaboration** across teams, institutions, and communities.
4. We recognize that **Innovation** improves our ability to serve.
5. We expect **Accountability** from all leadership, faculty, staff, and students.
6. We embrace a culture of **Inclusion** where every individual belongs.

NSHE Goals

1. Increase **access** to higher education.
2. Improve student **success**.
3. Close institutional performance **gaps**.
4. Meet **workforce** needs in Nevada.
5. Increase solutions-focused **research**.
6. Ensure system **coordination**, **accountability**, and **transparency**.