

# Frameworks for Successful ePortfolio Practice: Today and In The Future

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# <Outline>

- I. ePortfolio is a High Impact Practice <HIP>
- II. Strategies for Doing ePortfolio Well <Catalyst>
- III. Model for 21<sup>st</sup> Century Education <Entangled Learning>
- II. Questions & Comments

# <HIP> Why is ePortfolio a High Impact Practice?

- **High Impact Practice (HIP) Label** – developed by the Association of American Colleges & Universities (AAC&U) to identify ten officially approved practices (2008) that lead to student success. These are the most promising set of approaches to enhance student learning and success.
- **ePortfolio is HIP** – In 2016 ePortfolio was officially added as the 11<sup>th</sup> AAC&U high impact practice because the use of ePortfolios done well are shown through peer-reviewed research to produce the following results:
  - Students are more engaged in educationally purposeful activities
  - Students earn better grades (improved grade point average)
  - Students are more likely to persist (stay in college)
  - Student-centered “culture bending” (schools show improvement)
  - Powerful credentialing tool (demonstrate competency)
  - Integrates and enhances effects of all HIPs (10 other HIP’s)

# <HIP> Characteristics of AAC&U High Impact Practices

- Performance expectations set at appropriately high levels;
- **Significant investment of time and effort by students over an extended period of time;**
- **Interactions with faculty and peers about substantive matters;**
- Experiences with diversity;
- Frequent, timely, and constructive feedback;
- **Periodic, structured, opportunities to reflect and integrate learning;**
- Opportunities to discover relevance of learning through real-world applications;
- **Public demonstration of competence**

# <HIP> ePortfolio Practice Defined by AAC&U

ePortfolio is a coherent set of effective educational **practices** that link reflective, integrative, and social pedagogy. ePortfolio practice supports learning across boundaries – inside and outside the classroom, advising pedagogies, and educational and career development.

ePortfolio is also a **process** that, when done well, deepens reflection and dispositional and integrative learning, over time and across these boundaries.

Together, those practices and processes yield an organic **product** – an evolving multimedia collection of artifacts, reflections, and experiences that form a digital narrative of a student’s academic journey.”

# <HIP> High Impact Practice ePortfolio Resources

George Kuh, *High-Impact Educational Practices: What They are, Who Has Access to Them, and Why They Matter* (Washington DC: American Association of Colleges and Universities, 2008).

George Kuh, Laura Gambino, Marilee Ludvik, and Ken O'Donnell, *Using ePortfolio to Document and Deepen the Impact of HIPs on Learning Dispositions* (Urbana, IL: National Institute for Learning Outcomes Assessment, 2018).

<http://www.learningoutcomesassessment.org/documents/Occ%20paper%2032Final.pdf>

**American Association of Colleges and Universities (AAC&U):**

<https://www.aacu.org/eportfolios>

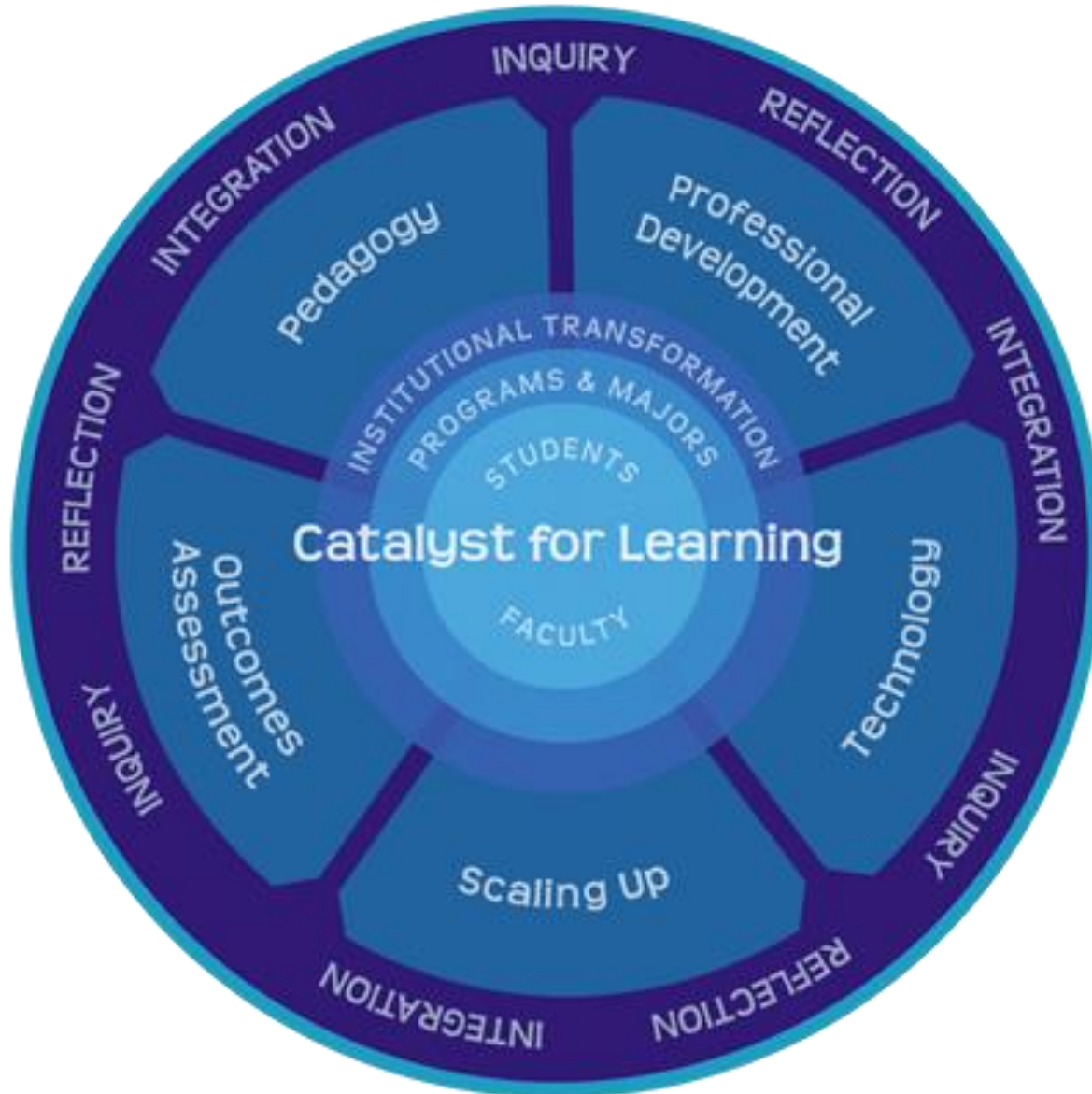
## <Catalyst> Catalyst Framework

The Catalyst Framework establishes a done-well structure for ePortfolio practice to help educators develop and scale high-impact ePortfolio practice.

Three value Propositions:

1. ePortfolio practice done well advances student success;
2. Making learning visible, ePortfolio practice done well supports reflection, integration, and deep learning;
3. ePortfolio practice done well catalyzes learning-centered institutional change.

# <Catalyst> Catalyst Framework





## <Catalyst> Key insights from Case Studies

- Pedagogy: **Identity development** and integration
- Professional Development: **Getting Started Tips** and **Seminars on Inquiry-Reflection-integration**
- Outcomes Assessment: **Closing the Loop** and curricular coherence
- Technology: **Building Community**, strengthening pedagogy
- Scaling Up; **Connecting to programs**
- Value Propositions: **supported by every case study**

## <Catalyst> Resources

**Bret Eynon and Laura M. Gambino, *High Impact ePortfolio Practice*, 2017, Stylus Publishing.**

**Bret Enyon and Laura Gambino, *Case Studies of High-Impact ePortfolio Practice*, 2018, Stylus Publishing, LLC.**

Catalyst for Learning: ePortfolio Resources and Research Website:  
<http://c2l.mcnrc.org>

# What is the Future for ePortfolio?



# Future of ePortfolio

Learning-centered education, such as the pedagogy described by Catalyst, is fueling increased ePortfolio usage. I see the trend towards learner-centered education growing. As a result of this trend and well developed ePortfolio practices, the majority of students will use ePortfolio well during formal education.

This usage, I predict, will extend into informal learning, vocational training, and professional development. As a result, lifelong learners will document (and credential) much of their learning, skill development, and knowledge in ePortfolio.

To do ePortfolio well outside of formal learning environments, a sturdy framework needs to be in place to support self-directed learning that is deep and reflective, that is documented fully and accurately, and that is shared with intention and integrity.

# <EL> Entangled Learning

Entangled Learning (EL) is a framework for self-directed learning in which individuals collaborate in shared practices to grow, deepen, and document their knowledge. EL is a learner-centered educational pedagogy for the 21<sup>st</sup> century in which students, and their teachers, leverage and build social networks to deepen knowledge. Learners who are *entangled* not only find joy in their learning, they develop lifelong skills and relationships to direct their own deep learning.

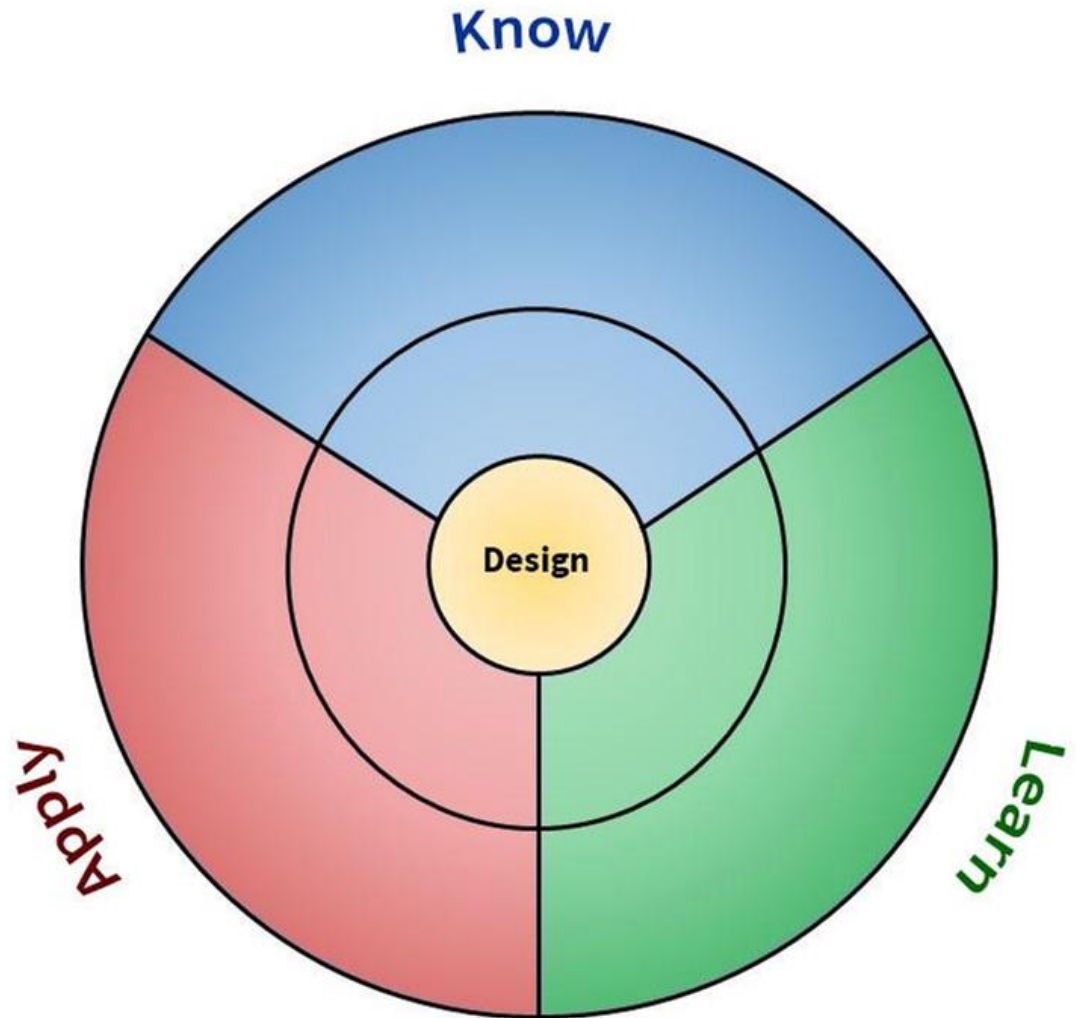
## Values Creation

1. Using ePortfolio well, individuals will become (skillful? Agile?) self-directed learners.
2. Documenting how and what they learn in ePortfolios, individuals improve their employment opportunities.
3. Skilled ePortfolio practitioners contribute to the culture of learning in groups, organizations, and institutions in which they participate.

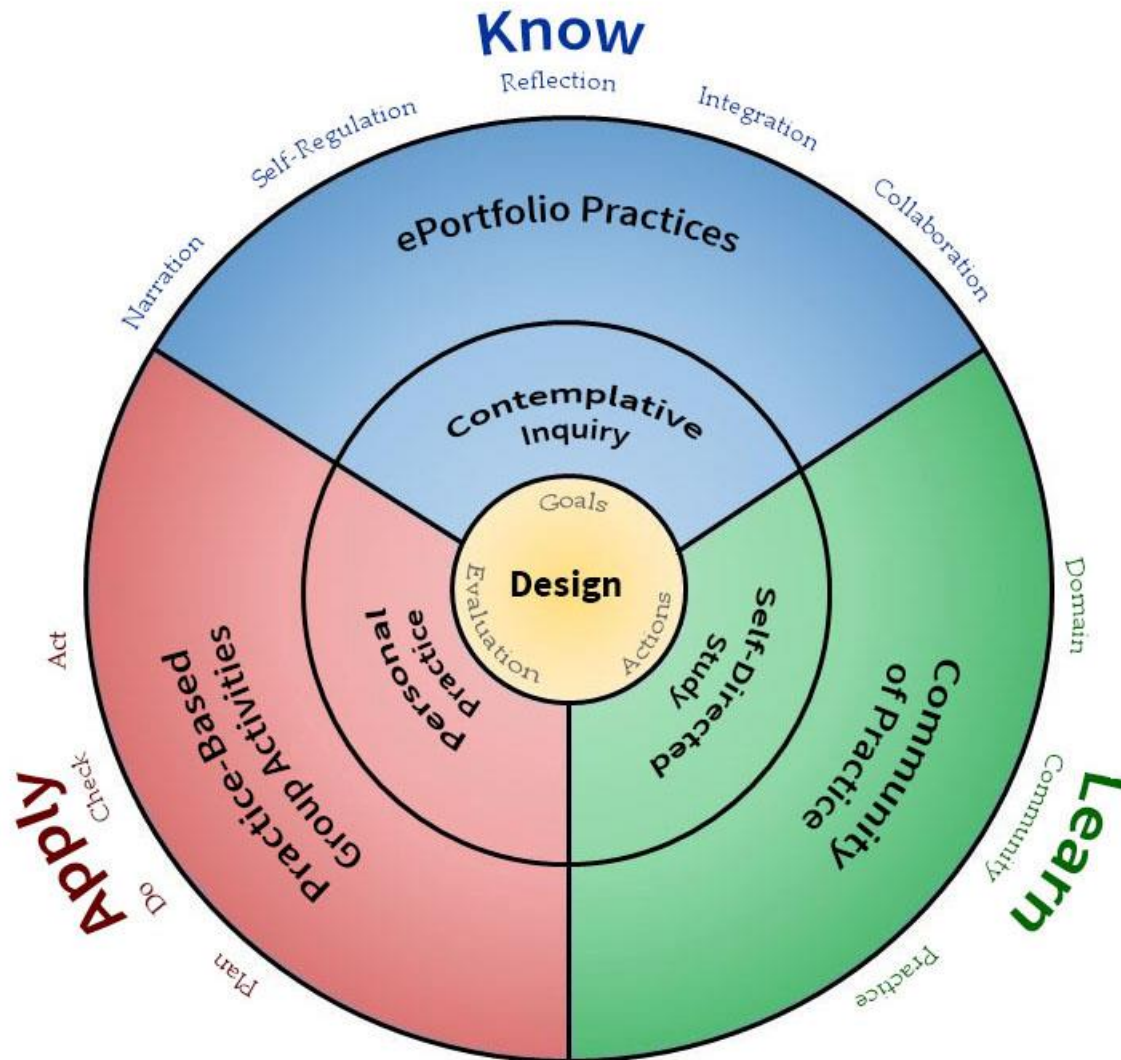
## <EL> Entangled Learning

**Why?** Equip people for skillful, agile, self-directed learning to address challenges of utmost importance.

**How?** EL is a framework and a process for engaging in and for facilitating self-directed learning in which individuals document their learning to deepen it and to share with others.

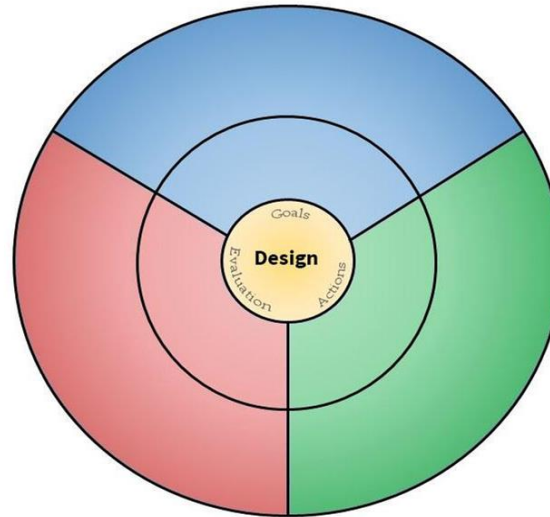


# <EL> Entangled Learning: Learner's Overview

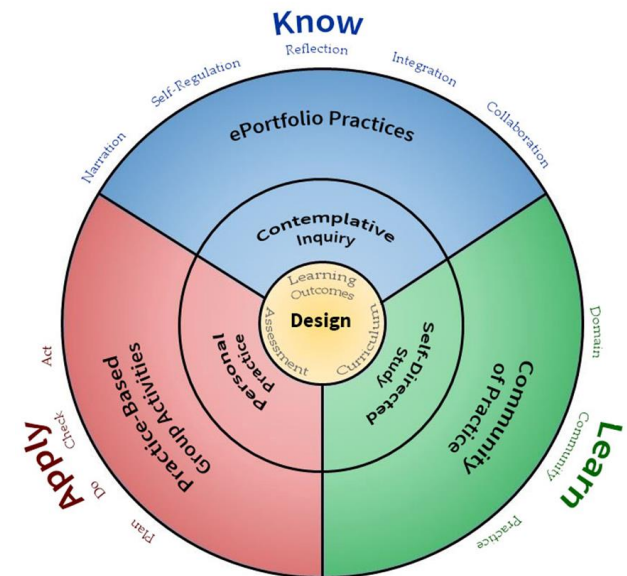


## <EL> Design

Learner: Develop a Learning Action Plan with goals, actions, and evaluation. Revise periodically as often as needed.



Facilitator: Guide students to develop and document Goals that are aligned with learning outcomes, curriculum, including available resources, and program assessments.

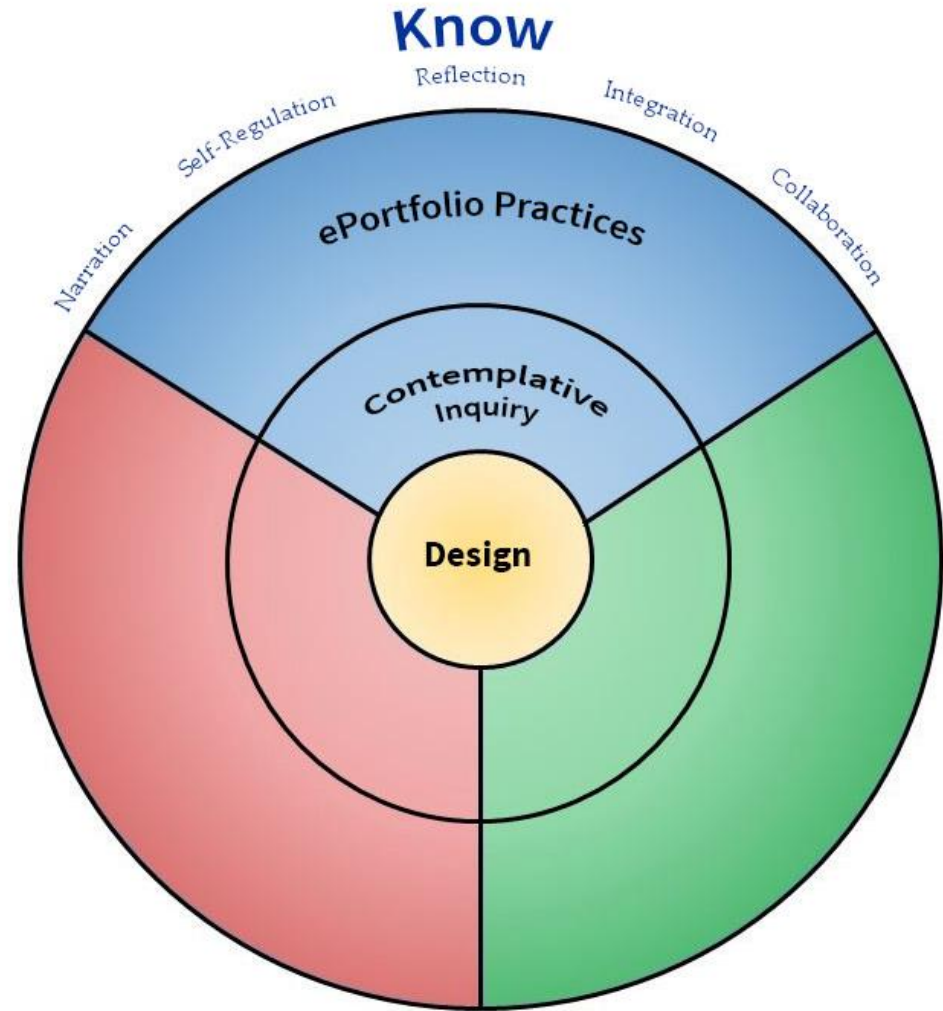




## <EL> Know

Learners: Contemplates to be aware of what they know and what they want to know more about. Documents, reflects upon, and validates learning With input from others as it takes place through ePortfolio.

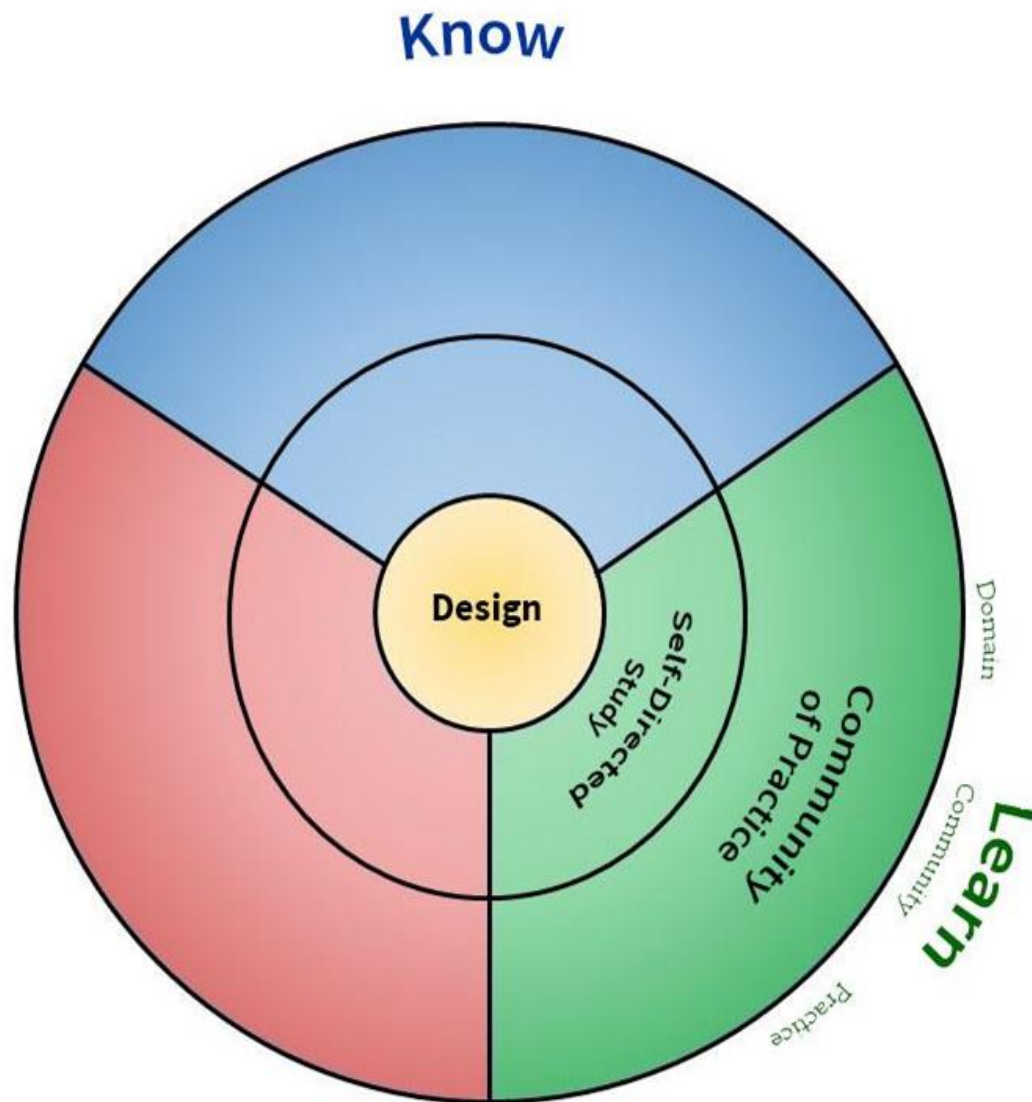
Facilitators: Provide space, time, role models, and training for for contemplative inquiry. Facilitators scaffold ePortfolio Entries, reading and commenting for formative and summative purposes.



## <EL> Learn

**Learner:** Use a variety of resources to study that match personal learning styles and preferences. Participate in one or more Communities of Practice (CoP) in a learning domain using multiple roles.

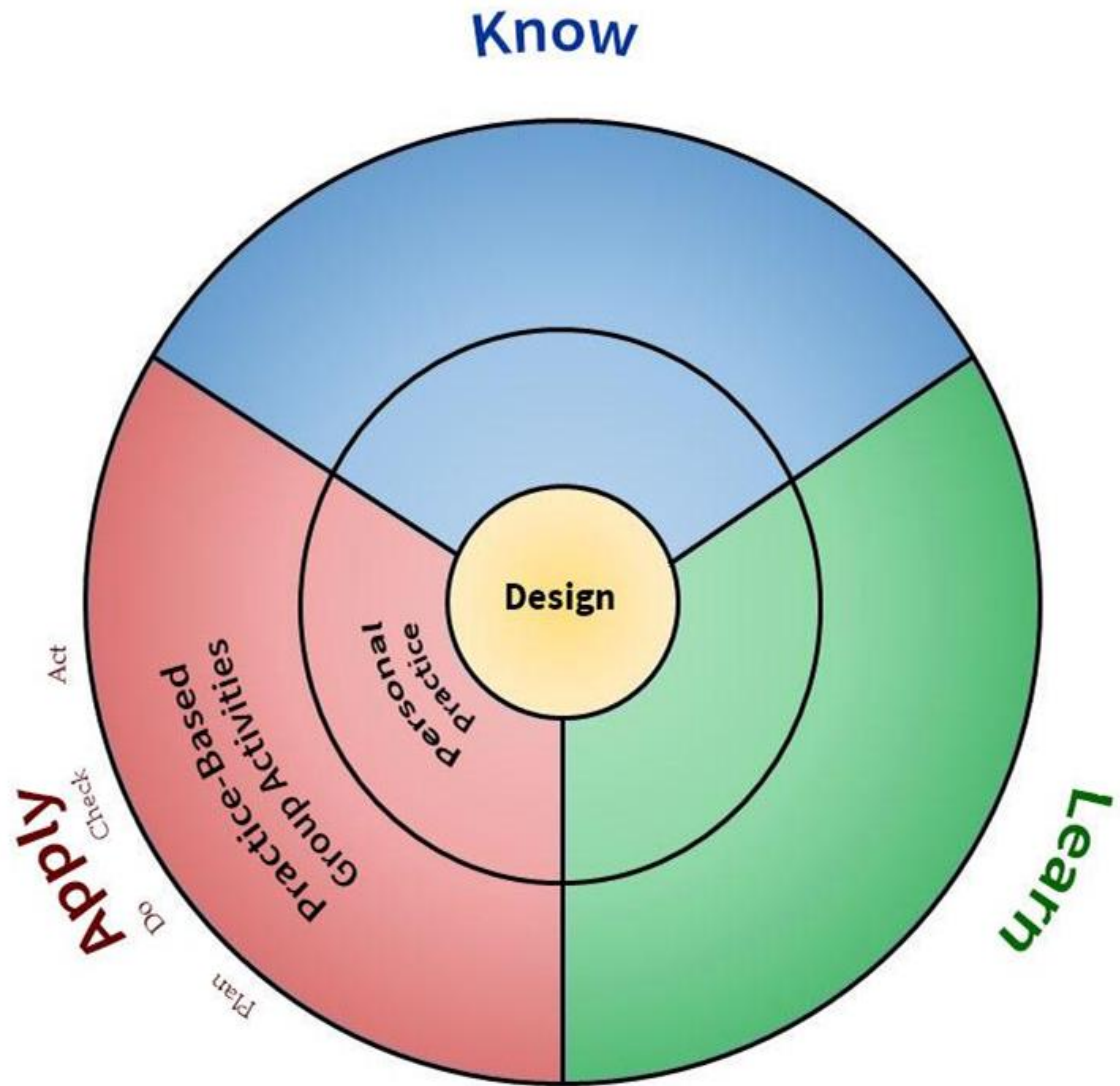
**Facilitator:** Provide ample study resources that are matched with desired learning outcomes. Serve as the catalyst to form CoP. When needed, coordinate CoP and provide mentors and coaches.



## <EL> Apply

Learner. Applies newly developed knowledge and skills to undertake issues, assignments, problems, or projects of interest with by oneself or in a group.

Facilitator. Suggest a range of activities that utilize newly developed knowledge and skills and challenge participants. Coach learner as they apply process to plan/do/check/act (PDCA). Evaluate final outcome in terms of learning outcomes and personal goals.



# <EL> Example of Entangled Learning

Institution: Clemson University  
Enrollment: 23,000  
Program: General Engineering Learning  
Community (GELC)

Purpose: Support students who are at risk of not succeeding due to inadequate preparation in math and science prior to college.



Actions: Students are enrolled the first semester in University Success Skills course in which they are “entangled.” Learning communities are formed in which students are given tools, resources, and people to direct their own learning to be successful STEM students.

Results: Overall GPA of GELC students improved and second year retention increased.

Recognition: Boyd Foundation gave a \$1.25 million grant to Clemson for continuation of the GELC program and the expansion of learning communities to prospective students.

# <EL> Clemson University

“When I tell students at Clemson that they can direct their own learning, the feeling in the room becomes charged with energy. Students either appreciate or are challenged by what EL asks of them: that they identify a purpose, become an agent in their own learning, and reflect on the experience and its meaning to them.”

Laurel Whisler



Laurel Whisler  
Assistant Director  
Academic Success Center,  
Clemson University  
Co-developer of Entangled  
Learning  
GELC  
Developer/Facilitator/Researcher  
/Writer

**Example: EL as a structure for self-directed learning in Math 1070 (Calculus)**

ePortfolio

Save the best examples of each action to put into my Final Portfolio toolkit  
Write/video why the example worked so well or helped with challenges

Contemplative Inquiry

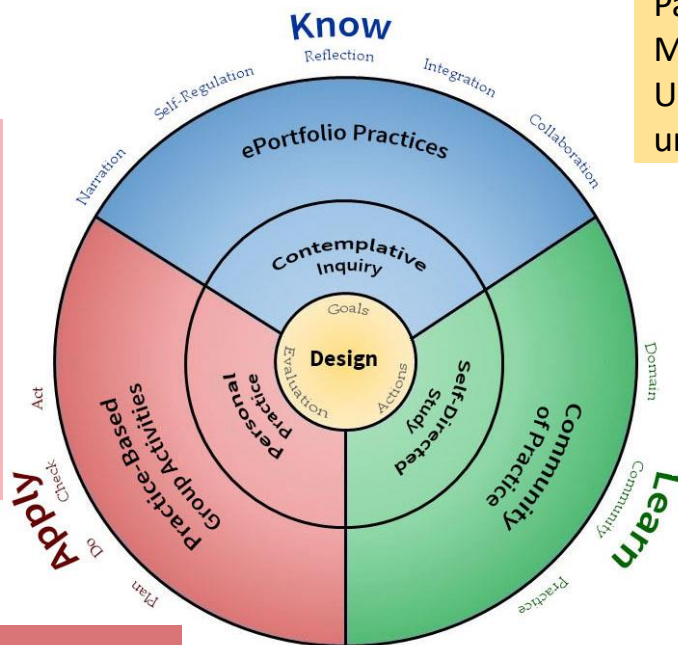
Reflect each Fri for 15 min on what the concepts mean and how they fit together

Design

Pass MATH 1070  
Meet course learning outcomes  
Use supplemental resources to understand concepts

Personal Practice

Do homework to demonstrate my understanding  
Write solution steps in English as I do homework  
Work a practice problem on each learning outcome over the weekend to check my comprehension



Self-directed Study

Read textbook for each class day  
Work examples daily to understand concepts  
Watch instructor videos before class  
Watch Khan Academy videos after class  
Track which learning outcomes I struggle with and go to tutoring for additional support

Practice-based Group Activities

Use in-class working group time to identify and work challenging concepts  
Use pass-the-problem to practice analysis and application

Community of Practice

Attend PAL (Peer Assisted Learning) for MATH 1070 on Tues each week

# <EL> Sample Learning Action Plan

| Entangled Learning Action Plan   |                                 |                                  |   | Put an "X" in columns E-Y each day to indicate that you did the action. Add dates as needed throughout the semester. You will turn this in with information on all tabs by 10:00 on 2/27 and with your ePortfolio narratives on 3/13 and 4/10. |   |   |   |   |   |   |                |   |   |   |   |            |   |   |   |   |
|--|---------------------------------|----------------------------------|---|--|---|---|---|---|---|---|----------------|---|---|---|---|------------|---|---|---|---|
| Domain:  |                                 | Becoming a stronger STEM student | The "Attend PAL" tab is started as an example to show you what is expected.   |  |   |   |   |   |   |   |                |   |   |   |   |            |   |   |   |   |
| Area   | Section                         | Course                           | Learning Strategies Action Items  | Feb 18-24  |   |   |   |   |   |   | Feb 25-March 3 |   |   |   |   | March 4-10 |   |   |   |   |
|  |                                 |                                  |   | M  | T | W | R | F | S | S | M              | T | W | R | F | S          | S | M | T | W |
| <b>Design (Big picture goals, actions, metrics for evaluation at the unit or semester level)</b> |                                 |                                  |   |  |   |   |   |   |   |   |                |   |   |   |   |            |   |   |   |   |
|  | Goals                           | ED 1970                          | Develop my toolkit of effective study strategies so that I can be a stronger student.   |  |   |   |   |   |   |   |                |   |   |   |   |            |   |   |   |   |
|  |                                 | MATH 1070                        | Pass MATH class so that I can enter the Engineering curriculum as a first semester sophomore  |  |   |   |   |   |   |   |                |   |   |   |   |            |   |   |   |   |
|  |                                 | CHEM 1020                        | Understand the Chemistry concepts thoroughly so that I have a good foundation for my Biochemical Engineering major                                    |  |   |   |   |   |   |   |                |   |   |   |   |            |   |   |   |   |
|  | Evaluation                      |                                  |   |  |   |   |   |   |   |   |                |   |   |   |   |            |   |   |   |   |
| <b>Learn</b>   |                                 |                                  |   |  |   |   |   |   |   |   |                |   |   |   |   |            |   |   |   |   |
|  | Self-directed Study             | ED 1970                          | Find a resource for distributed study   |  |   |   |   |   |   |   |                |   |   |   |   |            |   |   |   |   |
|  |                                 |                                  | Find a resource for using PAL/group study   |  |   |   |   |   |   |   |                |   |   |   |   |            |   |   |   |   |
|  |                                 | CHEM 1020                        | <a href="#">Read my textbook and take notes</a>   |  |   | X |   |   | X |   |                |   |   |   |   |            |   |   |   |   |
|  |                                 | MATH 1070                        | <a href="#">Work the example problems in the textbook</a>   | X  |   |   | X |   |   | X |                |   |   |   |   |            |   |   |   |   |
|  | Community of Practice           | MATH 1070                        | <a href="#">Attend PAL</a>  |  | X |   |   |   |   | X |                |   |   |   |   |            |   |   |   |   |
| <b>Apply (plan, do, check, act on the daily level or assignment level)</b>                       |                                 |                                  |   |  |   |   |   |   |   |   |                |   |   |   |   |            |   |   |   |   |
|  | Personal Practice               | All                              | <a href="#">Use 5 Day Test Prep Plan (distributed study)</a>  |  |   |   |   |   |   |   |                |   |   |   |   |            |   |   |   |   |
|  |                                 | All                              | <a href="#">Create a study guide for each learning outcome</a>  |  |   |   |   |   |   |   |                |   |   |   |   |            |   |   |   |   |
|  |                                 | Self                             | <a href="#">Avoid using addictive technology</a>  |  |   |   |   |   |   |   |                |   |   |   |   |            |   |   |   |   |
|  | Practice-based Group Activities | MATH 1070                        | <a href="#">Work practice problems with friends on my hall</a>  | X  |   |   |   | X |   | X |                |   |   |   |   |            |   |   |   |   |
| <b>Know</b>  |                                 |                                  |   |  |   |   |   |   |   |   |                |   |   |   |   |            |   |   |   |   |
|  | Contemplative Inquiry           |                                  |   |  |   |   |   |   |   |   |                |   |   |   |   |            |   |   |   |   |
|  | ePortfolio Practices            | ED 1970                          | Begin developing my final portfolio. In a folder, collect evidence of my best study practices and write brief description of what makes it effective. |  |   |   |   |   |   |   |                |   |   |   |   |            |   |   |   |   |

**Example: Process Flow  
For GELC Self-Directed  
Study Plan Assignment**

**(9) ePortfolio**

Write a narrative about the effect of these strategies. Link narrative to study notes.

**(1) Contemplative Inquiry**

Reflect on how you study. Where are the gaps between what you do and what you could be doing?

**(8) Design**

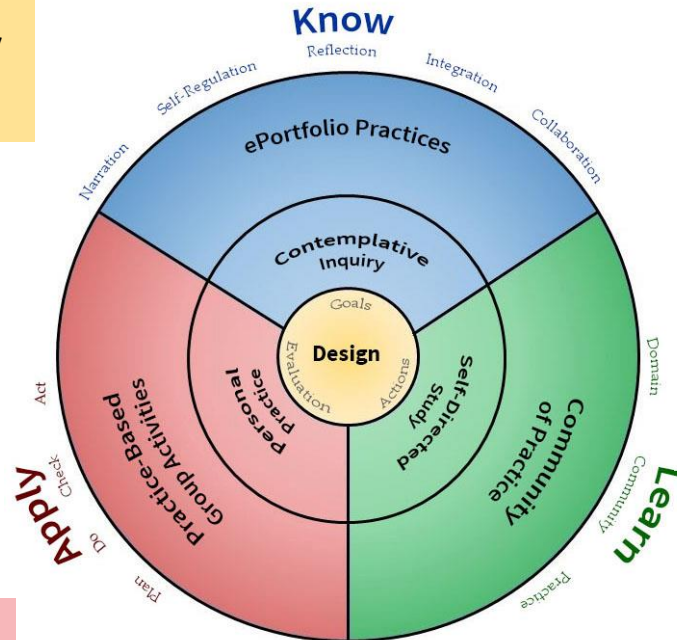
Modify LAP to incorporate study techniques into daily practice.

**(7) Practice-based Group Activities**

Work with your study group to identify how to integrate your preferred technique study sessions for your group. Check with the group how it is going and modify.

**(6) Personal Practice**

Use the strategies in your studies in multiple STEM courses. Note which strategies work best and why.



**(5) Design**

Identify metrics that will guide your evaluation of how you are doing with Learning and using new strategies.

**(2) Design**

Which two learning strategies will you apply to your STEM studies?

**(3) Self-directed Study**

Find two resources and use them to study.

**(4) Community of Practice**

Discuss these resources with your CoP. Summarize what you learned with your CoP. Ask others to do the same.



Landscape of STEM practices for GELC students

Effective learning strategies in one subject are applied to studying other STEM courses

Mathematics



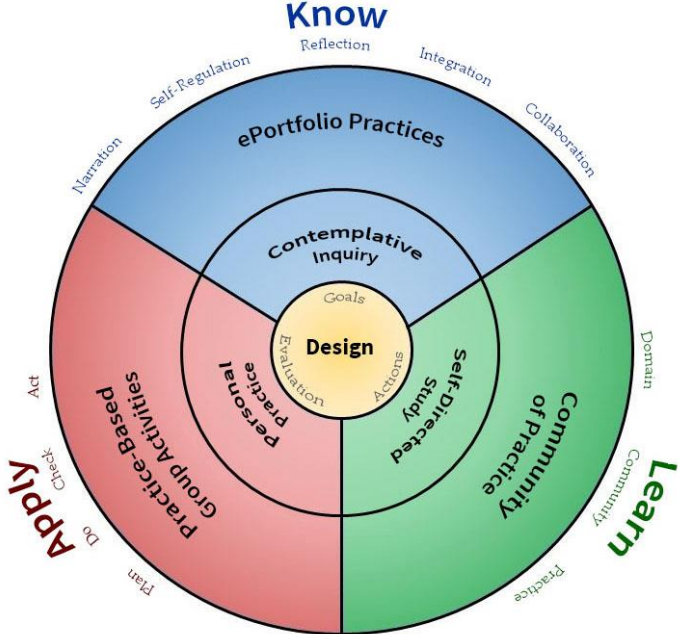
Engineering



Chemistry



Physics



## <EL> Example 2: Peer Educator Training

Clemson University

Peer Educator Training Program

180 – 200 student peer educators are employed each semester to be tutors and small group review leaders.

The training course is entangled:

- An instructor identifies course outcomes and orients peer educators to EL.
- Peer educators meet in small groups (CoPs) to learn the course material in order to meet the course outcomes and perform as tutors.
- Peer educators apply their learning in their roles as tutors.
- Peer educators document and reflect upon their learning in portfolios which are evaluated by the instructor for course credit.
- CoPs develop portfolios and present them to the class.

## <EL> Example 2. Peer Educator Student Comments

Abby Stephan

“Entangled Learning is so much more than just a learning model. In addition to creating a more conscious learner, it creates a more aware individual, on an intellectual, social, and psychological level. **Its flexibility allows it to be applied to virtually all aspects of life, and I personally have experienced its effects in unexpected places outside of the academic setting.**”

Molly Makos

“Before I was introduced to EL, I was an ‘every person for themselves’ type of learner. I never expected that something like EL would come along and be one of those defining factors in my life. However, after almost two years of working with it, EL has had a true impact on me. **I am more open-minded, more willing to solve problems with the help of others, and much more likely to take a project, make it mine and run with it.**”

# <EL> Example 3: University of Minnesota Duluth Learning Commons



<EL> Summary: What does it mean to be *Entangled*?



# <EL> Entangled Learning Resources

Entangled Learning Website, <http://www.entangledlearning.org>

Brown, J., Stringer, N., Anderson, R.K., and Whisler, L. (2018). *Supporting Student Learning Through Peer-led Course Support Initiatives*. ASEE International Conference & Exposition.

Jenson, J.D. and Treuer, P. (2014). *Definining the E-Portfolio: What It Is and Why It Matters*, Change: The Magazine of Higher Learning, 46:2, 50-57.

Whisler, L. (2019). Entangled Learning course materials: <https://bit.ly/2UfRGgy>

Whisler, L. & Treuer, P. (2017). [How to entangle peer educators](#). Synergy 10.

Whisler, L., Makos, M. & Anderson, R. (2019). *Engendering Learning: Experiences of Peer Educators Trained as Entangled Learners*, Journal of College Reading and Learning, vol. 49, no.1, pg 19-34.

Wenger, E., McDermott, R., and Snyder, W., (2002). *Cultivating Communities of Practice*, Harvard Business School Press, Boston, Mass.

Zajonc, A., (2009). *Meditation as Contemplative Practice*, Lindisfarne Books, Great Barrington, Mass.

# Thank You

Your questions  
and comments  
are welcome.