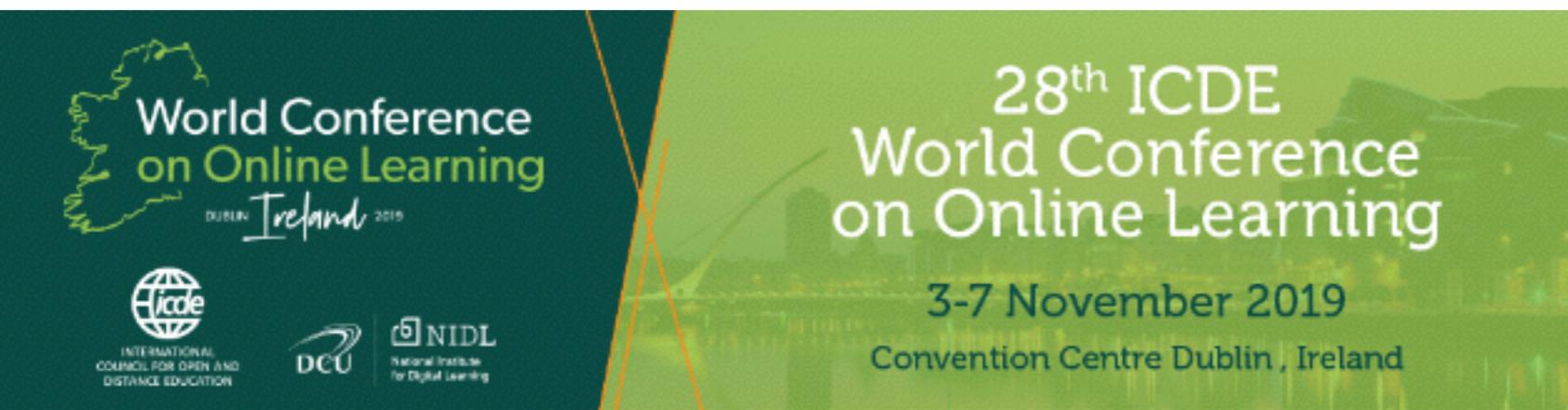# Learning Strategies Across Contexts in Online Higher Education:

A Lifelong Learning Ecologies Perspective

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World Conference on Online Learning
DUBLIN Ireland 2019

INTERNATIONAL COUNCIL FOR OPEN AND DISTANCE EDUCATION

DCU

NIDL National Institute for Digital Learning

28th ICDE
World Conference
on Online Learning

3-7 November 2019
Convention Centre Dublin , Ireland

How do students experience learning across contexts and practices—from formal to informal—in the context of online HE.?

Research Problem

Experiences of Learning
in Online HE

Experiences of Learning
in the Wider World

Lifelong Learning Ecologies
Analytical Framework

"The "Learning Ecologies for Lifelong Learning" construct emerges as a means to provide an integrated conceptualization of learning **as a complex phenomenon bridging formal, non-formal and informal learning experiences.** This construct provides a framework to understand how individuals select, experience, navigate and participate in learning experiences that span multiple contexts" (Sangra et al., 2019)

Sangrá, A., Raffaghelli, J. E., & Guitert-Catasús, M. (2019). **Learning ecologies through a lens: Ontological, methodological and applicative issues. A systematic review of the literature**. British Journal of Educational Technology.

Peters, M., & Romero, M. (2019). **Lifelong learning ecologies in online higher education: Students' engagement in the continuum between formal and informal learning.** British Journal of Educational Technology

Lifelong Learning Ecologies Analytical Framework
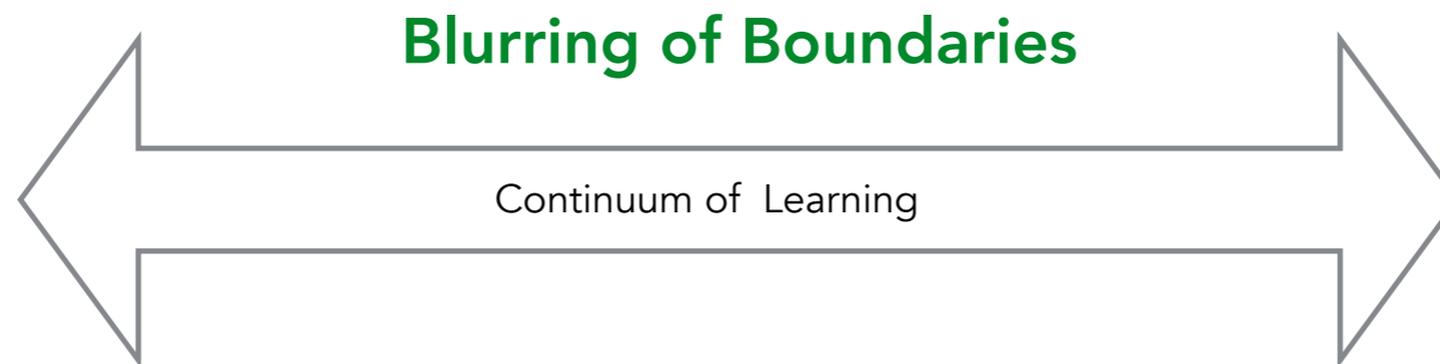
LE Sensitizing Model in Online HE
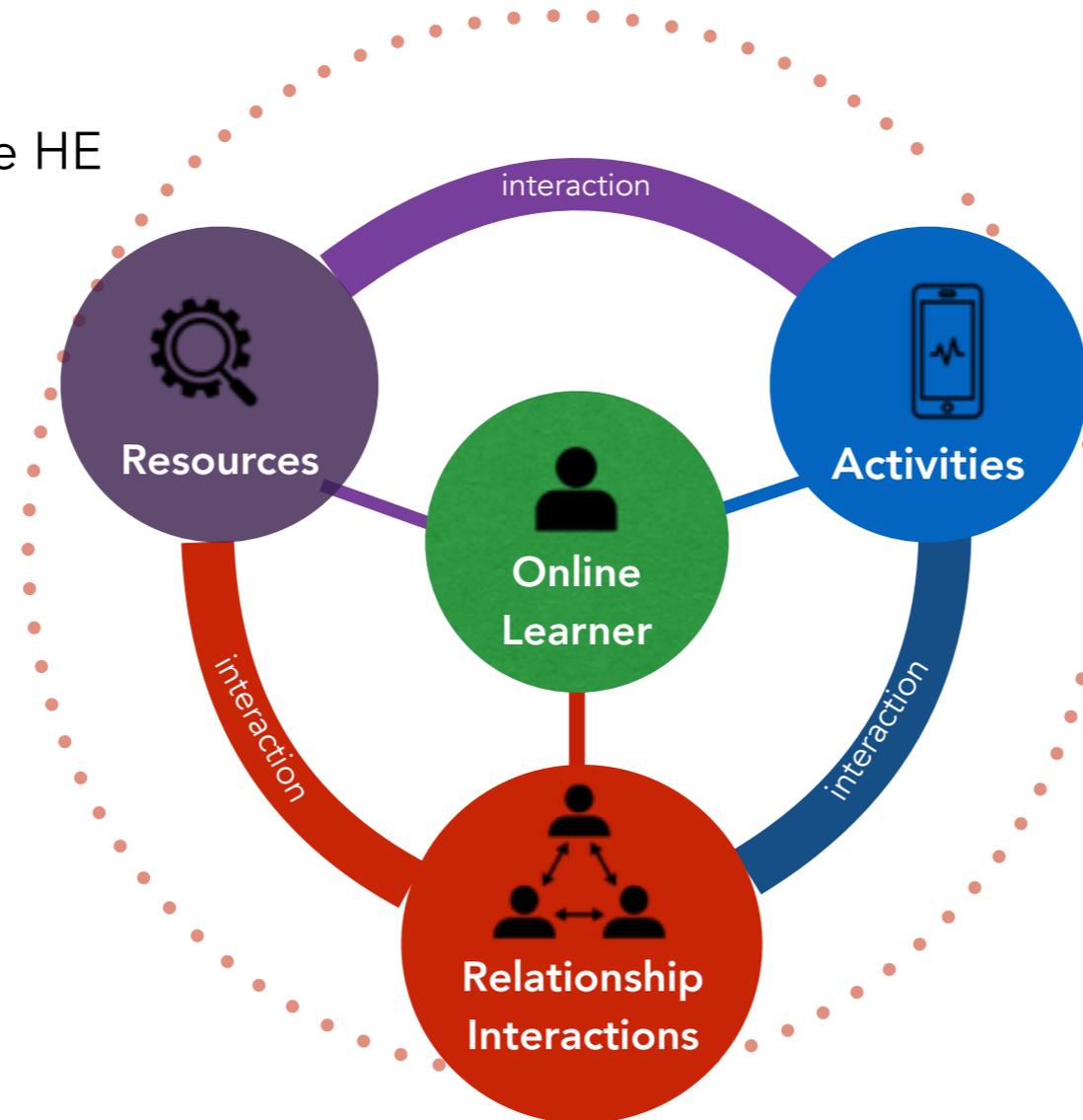
The study uses Barron's (2006 p.195) ontological definition of a **learning ecology** "as the set of contexts found in physical or virtual spaces that provide **opportunities for learning.** Each context is comprised of a unique configuration of **activities, material resources, relationships, and the interactions** that emerge from them"

Learning Ecologies across a Continuum of Formality

"It is more accurate and sensible to conceive 'formality' and 'informality' as attributes present in all circumstances of learning" (Colley et al. 2003 p.1)

Blurring of Boundaries

Continuum of Learning

Formal Learning

Informal Learning

Colley et al. (2003); Van Noy et al. (2016) Greenhow & Lewin (2016)

Methods & Research Design

Predominantly Qualitative Mixed Methods
Interpretive Multiple Case-study
Exploratory Sequential Design

Phase

Procedure

Research Design
Conceptualization
& Development of LE
Sensitizing Model
(QUAL)

- Sensitizing LE model in the context of online HE through adductive reasoning

Qualitative Data Collection

- Program documentation
- Interviews
- Online Observation (Program & Individual Cases)

Qualitative Data Analysis

- Thematic network analysis

Quantitative Data Collection

- Survey built on latent variables from QUAL thematic analysis and LE sensitizing model

Quantitative Data Analysis

- Descriptive and Multivariate analysis (PCA, Cluster Analysis) of survey data using SPSS

MM Data Integration and Interpretation

- Integration, interpretation and explanation of the qualitative and quantitative findings

Mixed Methods Results

Learning Strategies Across Contexts

Formal Learning

Informal Learning

Sample and Population

Study Status
9 Part-time Students
3 Full time students

Professional Trajectory
3 Early Career
2 Early-Mid Career
5 Mid-career
2 Mid-Late career

Study Level
-8 Masters
-4 Doctoral (1st Year)

Employment Status
2 unemployed
8 Full-time
2 Part-time (including consulting)

Cross Case Profile
At a Glance

58% Female
42% Male

Previous Experience Studying Online
4 no prior experience
4 previous Online/Distance Master
4 Limited Experience with LMS platforms

4 students

M.ED in Education and ICT

UOC Universitat Oberta de Catalunya

4 students

M.Sc. in Digital Education

THE UNIVERSITY OF EDINBURGH

4 students

M.ED in Learning and Leadership Design

Socio Demographic Profile & Professional/Academic Trajectories

Age

min	mean	max
24	37	63
min	mean	max
26	39.8	55

Work Experience (years)

min	mean	max
0	14.1	40
min	mean	max
1	n/a	26

Previous Experience Studying Online (years)

| min	mean	max
0	2.6	15
4 Cases no previous experience	**4 Cases** limited experience with LMS platforms	**4 Cases** previous Online/ Distance Master

Study Status and Study Level

Full-time	Part-Time	Masters	1st Year Phd
21%	79%	85%	15%
Full-time	Part-Time	Masters	1st Year Phd
33%	66%	66%	33%

Employment Status

Full-time	Part-Time	Unemployed
78%	17%	5%
Full-time	Part-Time	Unemployed
66%	16.5%	16.5%

Survey Data n=178
Case-Study Data n=12

Traits of the Academic Curriculum
influencing Student Experiences of Learning
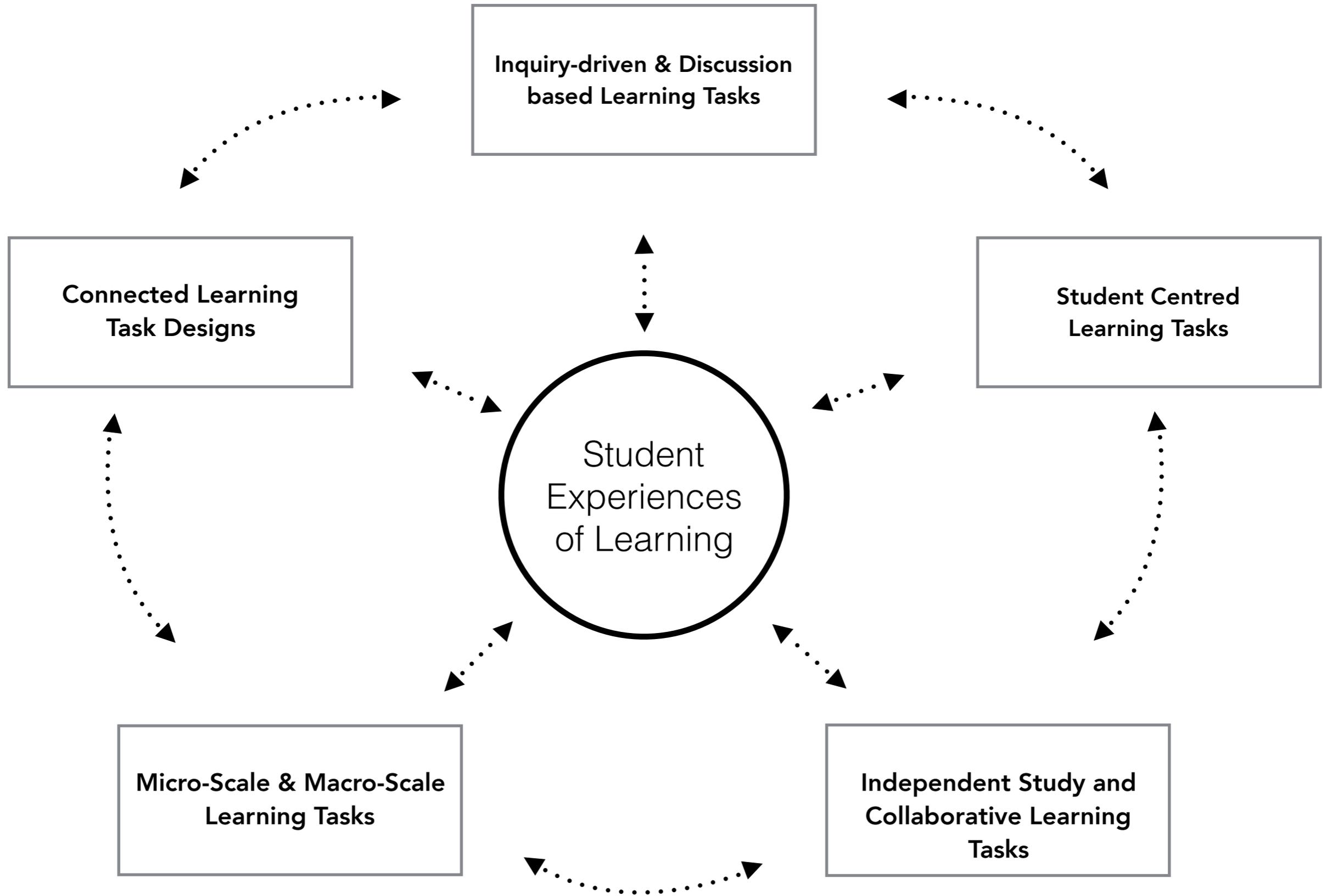
LE Matrix in Online HE:
Identified Learning Strategies and Practices Across Contexts

Formal Focus

- Metacognitive and self-regulation skills

- Active study engagement by staying up-to-date

- Peer-collaboration and peer-feedback activities

- Building Information and data literacy skills

- Course community building & help seeking in course forums

- Time management

- Finding accountability in program peer group

- Note taking and organizing course materials

- Connecting micro-scale with macro-scale course tasks

- Informal side-chats and study groups

- Peer mentoring

- Connecting themes from previous courses to current course

- Self-directed inquiry related to course activities

- Engagement with social networks to support coursework

Individual/ Autonomous Focus

Collaborative/ Social Focus

- Connecting course assignments to professional practice

- Connecting with colleagues through common research and personal interests

- Selecting courses based on impact in professional practice

- Discussing academic topics with colleagues in professional practice.

- Bringing academic knowledge/ experiences into professional practice

- Self directed Inquiry outside of course requirements

- Using social networks to engage with course themes once formal course has finished

- New media production

- Media viewing applied to academic or professional practice

- Searching for training/employment opportunities through online networks

Informal Focus

LE Matrix in Online HE:
Conceptual Zones of Learning

Formal Focus
Determined by Program

Individual/Autonomous
Studying

Formal Collaboration and
Group Projects

**Individual/
Autonomous
Focus**

**Collaborative/
Social Focus**

Self-directed Learning &
Professional Development

Professional
Networking & Collaboration

Informal Focus
Determined by Learner
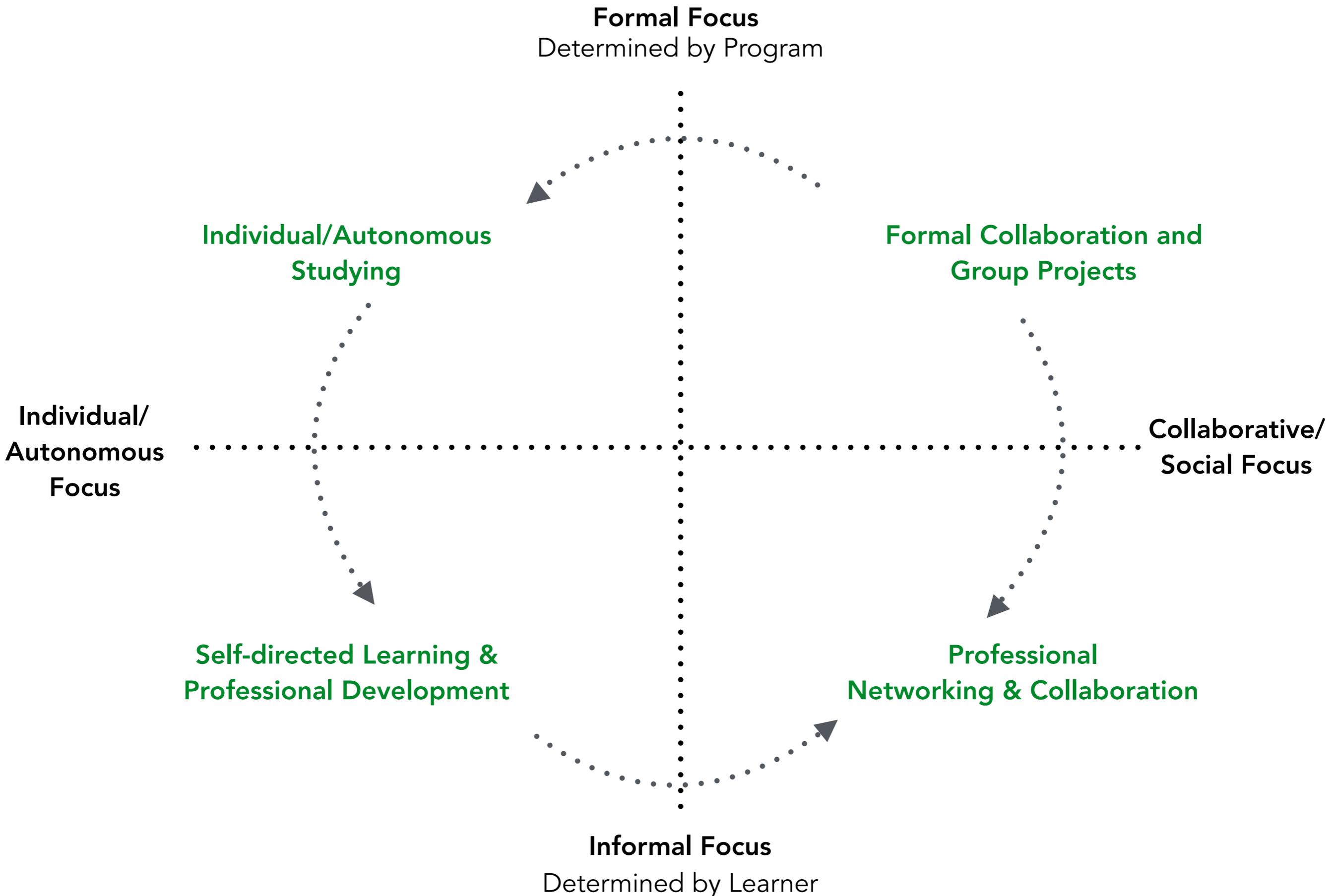
Quantitative Procedures

Block	PCA Solution	Variable Description
Digital Activities & Practices across contexts	**Creative & Collaborative Activities (57.7%)**	• Integrating and elaborating digital content that others have created. (0.827) • Creating and Developing your own digital content. (0.812) • Creatively using digital technologies by applying different tools and resources (0.796) • Identifying technological needs and solving technical problems. (0.792) • Collaborating in the co-creation of resources, information and knowledge. (0.708)
	Intentionally Networking Activities (47.67%)	• Engaging in Mentoring and/or coaching (0.840) • Interacting more formally across my Professional Development Networks. (0.832) • Interacting with Online Interest Groups and Online Communities (0.798) • Communicating with peers and peer groups (0.545)
Digital Learning Resources	**Digital Tools for Academic Production, Communication, and Networking (57.96%)**	• Multimodal and Multimedia Editing and Sharing tools (0.801) • Social Networking Systems (0.788) • Communication tools (i.e. whatsapp, skype, google hangout etc.) (0.764) • Data Gathering and Analysis tools (0.687)
	Networked and Openly Sourced Content (37.12%)	• Content accessed on Social Media (.820) • Personal websites, Personal Blogs, and Wikis (.776) • Online Games & Virtual Worlds (.719) • Mass Media (.677) • Open Educational Resources (.600)
	Formal and Institutionally Sourced Content (19%)	• Content accessed in Scientific Knowledge Databases and Repositories (.832) • Content facilitated by the academic program (.775) • Content accessed on Institutional Websites (.566)
Relationship Interactions	**Networked Relationships across contexts (52.9%)**	• Personal Social Networks (friends, contacts, family) 0.866 • Peers outside of school and work 0.792 • Professional Social Networks (professional associations, contacts, acquaintances) 0.782 • Online Interest groups and communities of practice 0.688 • Work colleagues 0.553
	One-to-One and small group relationships in formal contexts (13.8%)	• Interactions with Teacher(s) 0.779 • Small group interactions with university peers (i.e. study/research/class/project groups) 0.777 • One to one interactions with university peers. 0.737

Joint Visual Display of LE Components within LE Matrix

Formal Focus

**Individual/
Autonomous Studying**

**Formal Collaboration &
Group Projects**

Browsing, Managing, and
Sharing Information/
Knowledge Activities

Intentionally
Networked
Activities

Creative and
Collaborative
Activities

Learner Activity

Everyday browsing,
and communicating,
Activities

Individual
Focus

Digital Tools &
Technologies for
production and
networking

Digital
Learning
Resources

Peer
Collab.
and Social
Support

Networked
relationships
across contexts

Collaborative
Focus

Networked and
Openly Sourced
Content

One-to-One and small
group relationships in
formal contexts

Formal and
Institutionally
Sourced Content

**Self-Directed Learning
& Professional Dev.**

**Professional Networking
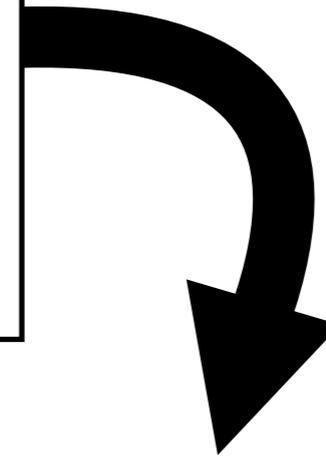& Collaboration**

Informal Focus

Feedback Loop of Engagement Patterns
Between Academic & Professional Practice

Academic Practice
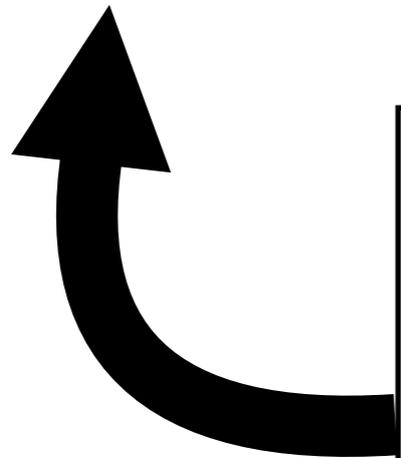### Impacts Professional Practice When:

- Selecting courses based on impact in professional practice
- Grounding professional practice in academic research/concepts/perspectives
- Intentionally connecting micro and macro course assignments (dissertation) with professional practice
- Discussing academic topics with colleagues in professional practice.
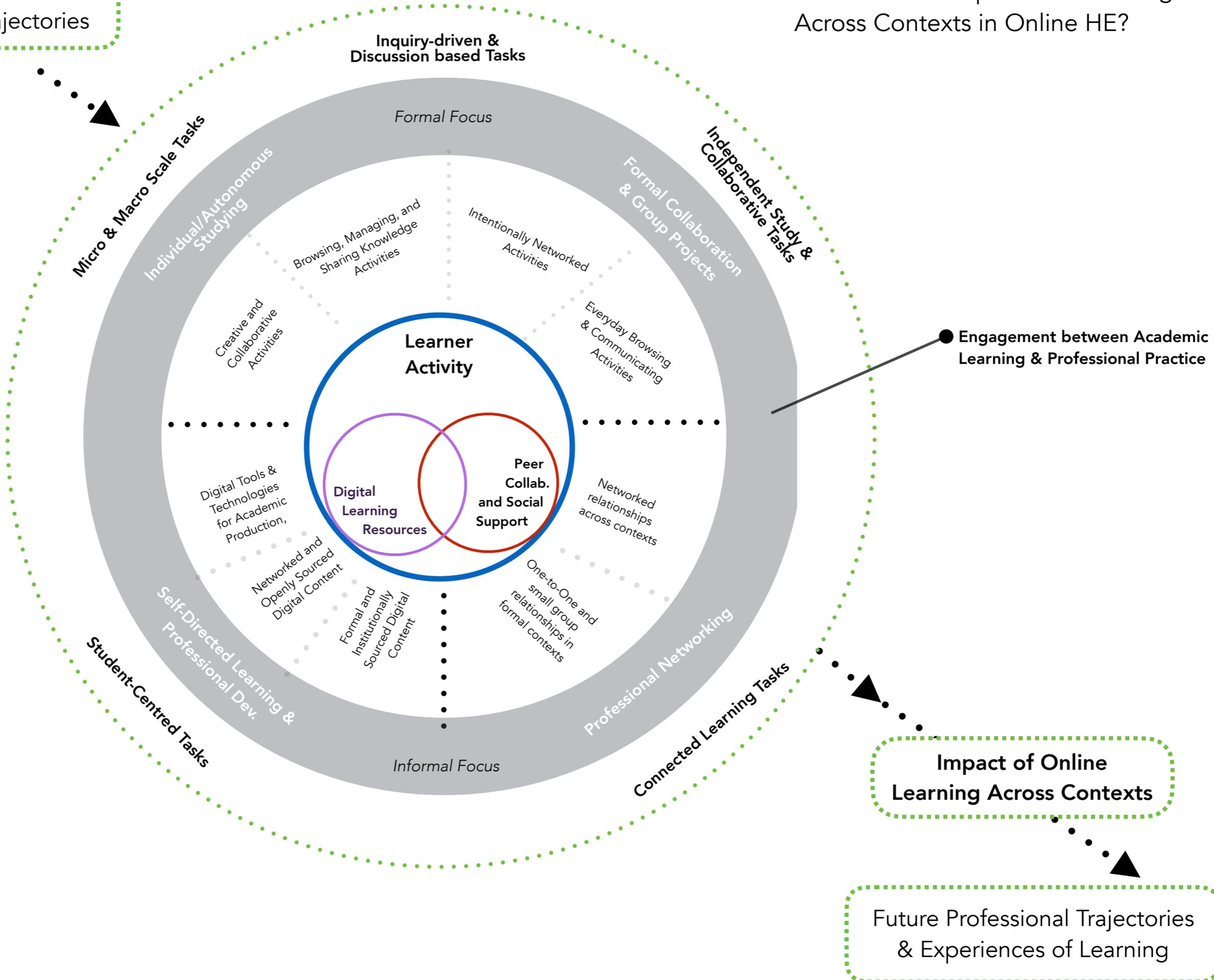
Professional Practice
Impacts Academic Practice when:

- Past Professional Practice influences current academic practice
- Professional practice & academic activity both involve online and remote collaborative and project based work
- Professional practice requires/encourages professional updating in academic field
- Professional context encouraged study in academic program

How do Students Experience Learning Across Contexts in Online HE?

Professional and Academic Trajectories

Impact of Online Learning Across Contexts

Future Professional Trajectories & Experiences of Learning

Engagement between Academic Learning & Professional Practice

Inquiry-driven & Discussion based Tasks

Micro & Macro Scale Tasks

Independent Study & Collaborative Tasks

Student-Centred Tasks

Connected Learning Tasks

Formal Focus

Informal Focus

Individual/Autonomous Studying

Formal Collaboration & Group Projects

Self-Directed Learning & Professional Dev.

Professional Networking

Browsing, Managing, and Sharing Knowledge Activities

Intentionally Networked Activities

Creative and Collaborative Activities

Everyday Browsing & Communicating Activities

Digital Tools & Technologies for Academic Production,

Networked relationships across contexts

Networked and Openly Sourced Digital Content

One-to-One and small group relationships in formal contexts

Formal and Institutionally Sourced Digital Content

Learner Activity

Digital Learning Resources

Peer Collab. and Social Support

Conclusions & Recommendations

★Understanding human learning across multiple contexts is a complex question. Using a LE analytical framework **has demonstrated the effectiveness of this construct for analyzing learning across multiple contexts mediated by digital technology**

★ Lifewide learning designs in online HE **need to recognize that academic learning is taking place alongside a range of learning spaces and practices,** including professional learning.

Conclusions & Recommendations

In order to fully harness the potential of online education:

★ An essential approach could be through a **connected curriculum framework** (Fung, 2017), recognizing **that online learners regularly blend formal and informal learning networks to support learning in online HE (Czerkawski, 2016)** and in particular making explicit connections across subjects and out into the world, **connecting academic learning with workplace learning**, and connecting learners with each other, **across program phases and cohorts and with alumni networks**

★ **Forms of boundary crossing, connected & lifewide learning should be encouraged and enabled** through program development and curriculum design, including encouraging peer mentorship networks as a program strategy for supporting student development

Thank You For Your Attention

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What is your experience with connected curriculum in Online HE?

Do your institutions support and empower forms of boundary crossing and connected learning?

In your experience, what are the challenges and limitations of researching learning across contexts?

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