

HOW DOES INTERACTION CONTRIBUTE TO THE ONLINE LEARNING EXPERIENCE: DEVELOPING COMMUNITIES OF DIALOGUE AND REFLECTION

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Webinar at SMU: Centre for Teaching Excellence

I. OVERVIEW OF PRESENTATION

1. Introduction
2. A model of why and how interaction supports effective learning
3. Moving online: Synchronous and asynchronous activities: using your face to face activities contextualized to the online setting
4. 2 research-based online teaching and assessment strategies and why they are effective
 - a. Instructor Video entries
 - b. Online learning journals (blogs)
5. Summary and take-away thoughts

1. A BIT ABOUT MY CONTEXT...

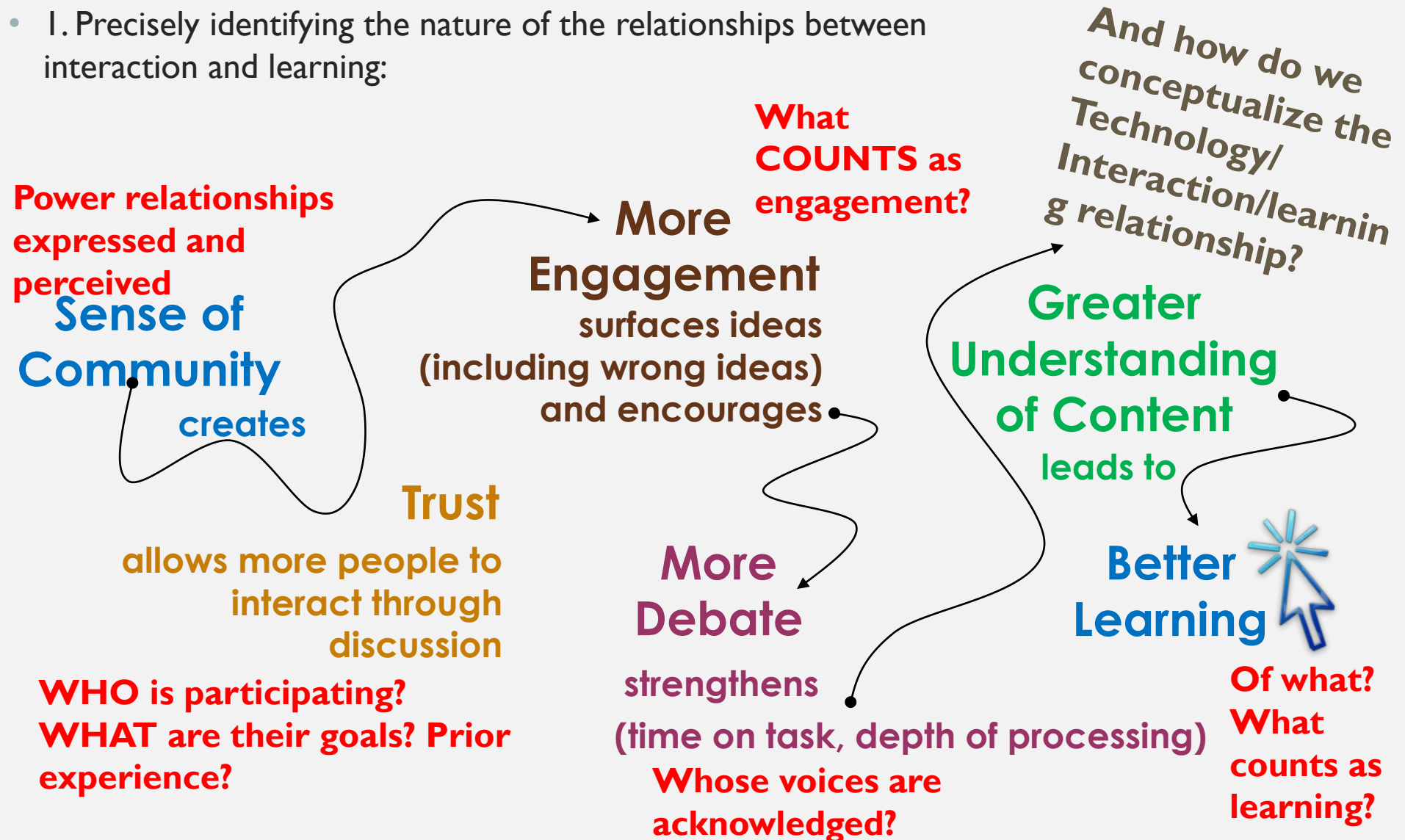
- Research in **educational technology** since the 1980's
- Designing **online learning** environments for k-12 students to try to support deep understanding in blended classrooms (e.g. CSILE, Knowledge Forum).
- Last 15 years focused more on higher Ed and fully **distance classes**—mostly grad and teacher education—SSHRC funded research
- I am the **Chair of CTL** and a co-designer (with Jim Hewitt) of **PeppereR**, our collaborative in-house discussion environment

2. INTERACTION AND COLLABORATION IN ONLINE LEARNING..

- What keeps people motivated in online courses which historically have high drop out rates
 - What “counts” as interaction?
 - We understand from a constructivist perspective on learning that peer collaborative discourse itself is a learning tool vs. solely teacher directed or teacher/student interaction only
 - And prior research tells us that: that a “lack of community, in the online learning environment, can result in student isolation, frustration, boredom, overload, and low course completion rates” (Young & Bruce, 2011, p.220).

2. CHALLENGES IN UNDERSTANDING INTERACTION AND ITS RELATIONSHIP TO LEARNING:

- 1. Precisely identifying the nature of the relationships between interaction and learning:



3. MOVING ONLINE: SYNCHRONOUS VS ASYNCHRONOUS TOOLS

- Each mode has particular affordances:
 - Video-conferencing, online chat, texting are typically used **synchronously**. They are useful for building **social presence, community, logistical planning, organizing, brainstorming, and small group activities**. The speed of interaction and turn-taking is closer to face-to-face, but has the additional advantage of being able to be archived, and thus serve as a learning trace for subsequent review.
 - Discussion environments, bulletin boards, wikis and blogs are typically used **asynchronously**. Useful for **reflection and processing of ideas, peer, teacher and self assessment** because there is time before responding. The processing of text results in more, and more careful processing of ideas.

3. HOW CAN ASYNCHRONOUS TECHNOLOGIES SUPPORT SYNCHRONOUS LEARNING?

- Discussion environments (e.g. LMS's) allow peer discussion and debate: opportunity to articulate and re-examine ideas (**elaborating concepts; more time on task**).
- Multiple perspectives may be expressed requiring students to justify their choices/decisions (**deeper processing and elaboration**).
- Instructor role becomes one of monitoring or guiding, e.g. getting students to bring back written summaries of group activities and discussion ; checking understanding through review of written entries and intervening **with just-in-time feedback**.

3. ENCOURAGING STUDENTS TO BE ACTIVE ONLINE LEARNERS

- Adapt the activities you like to do in face to face teaching: for example:
 - Getting discussion going through asking controversial questions, or having students generate issues
 - Working through case studies in small groups and preparing a summary to share with the class and a presentation on a Synchronous platform
 - Having debriefing discussions post-assignment or activity which can be written or done in the group—good to ask regularly for feedback so you can do some just in time adjusting to the course process.
 - Give students opportunities to take various leadership roles, help them take over some of the moderating of small group sessions etc.

4. INSTRUCTIONAL STRATEGIES TO PROMOTE ONLINE ENGAGEMENT

- Examples of two research-based online teaching and assessment strategies and why they are effective:
 1. Instructor Video entries
 2. Online Learning Journals (blogs)

4. OPPORTUNITIES FOR NEW FORMS OF ASSESSMENT AND EVALUATION

- Permanent “**trace**” of online activity over time makes different forms of assessment possible in online environments: Ongoing assessment increases mastery:
 - Both instructor and learner can **track learning trajectories over time** (e.g. blogs and learning journals; online portfolios (e.g. choose 3 most meaningful discussion entries)
 - Self-assessment (valuable tool)—can review learning to date and get a **metacognitive perspective on learning change** (e.g. Learning Journals).
 - Peer Assessment tools or activities (e.g. Peer Scholar) helps students **refine and test understanding**
 - Access to **automatic tracking data** can provide picture of how learners are engaging so you can intervene in needed instances. These kinds of tools are on the increase.

4A. INSTRUCTOR ONLINE VIDEOS

- Even instructional videos should be less than 15 minutes.
- Longer instructional segments are better done as audio – podcasts—with accompanying text in the course conference (facilitates review and alternate media format for special needs students).
 - Audio recordings can be accessed through mobile devices to be listened to on the go.
- Summary videos—can capture the essence of the week's commentary or readings can be done either
 - as a talking head --here the goal is to establish teacher presence)
 - Or as a screencast--using software like Camtasia or Screenflow (Mac), or directly in YouTube. This allows voice overs while clicking around the screen and showing different artifacts. I like it as a form of just-in-time responses to student work

4A. TEACHING VALUE OF INSTRUCTOR VIDEOS

- Creating a sense of **Instructor presence**: personal introduction to the students
- Informational (I use videos to explain the conference functionality for short 2 minute videos).
- Instructional:
 - to stimulate discussion;
 - to orient students to a course.
 - To summarize key ideas discussed in a week; identify model entries by students
 - To summarize a particular theme across several weeks
 - To quickly provide feedback or emphasize important instructions or deadlines,
- These are very flexible-can be used anytime and anywhere for multiple educational goals

4A. COURSE VIDEO --EXAMPLE

Each week I will post a short video summarizing the week's discussion and themes and linking these ideas across the course. I also give updates on course issues and housekeeping so please watch these each week.

Week 1, CTL1608 Fall 2014

Curative Invention and the Design of Online Learning Environments Pepper

Learning Journals

About your Learning Journals

Below are LATEST JOURNALS by DATE DESCENDING (most recent first):

- Rafael's Journal by Rafael Ramirez (10/10/14, 10:00 PM)
- Robert's Journal by Robert Schuman (10/10/14, 10:00 PM)
- Michael's Journal by Michael Schuman (10/10/14, 10:00 PM)
- Wendy's Journal by Wendy Schuman (10/10/14, 10:00 PM)
- Elizabeth's Journal by Elizabeth Schuman (10/10/14, 10:00 PM)
- Justin's Journal by Justin Schuman (10/10/14, 10:00 PM)

Below is a starting point rubric for evaluating self-assessment in which each of you will be during the course, and consider how it might...

[Intro](#)[End](#)

4 A. MAKING ONLINE VIDEOS: AUDIENCE CONSIDERATIONS

- Make short notes about the points you want to cover and keep them ideally at eye level while you make the video.
- Look into the camera and imagine you are actually talking to the students. This is weird at first but you acclimatize, and gives the feeling that you are talking to them!
- Be spontaneous—hence not scripting the talk—imagine you are teaching in the room with them. This gives students a sense of you as a person.
- It is more interesting and will maintain student attention if you speak naturally rather than read a fully prepared text: use notes instead
- Practice by yourself until you feel more comfortable!



4B. IMPLEMENTING ONLINE LEARNING JOURNALS

- Online “diary”-a very flexible instructional tool written and shared as a learning and reflection tool in an online discussion environment:



☆ [About your Learning Journals](#) by Clare Brett #17, Wed August 20, 2014, 5:34 PM
 ☆ [My self-assessment](#) (private reply) by Sarah M, visible to 2 people #2490, Mon November 24
 ☆ [Katie's Journal](#) by Katie N #524, Tue November 18, 2014, 11:02 PM
 ☆ [Journal Rubric](#) (private) by Katie N and Clare Brett #2501, Wed November 26, 2014, 11:59 A
 ☆ [Eckhard's journal](#) by Eckhard S #559, Sat November 22, 2014, 10:59 AM
 ☆ [Madeleine's Journal](#) by Madeleine S #562, Sat November 22, 2014, 11:09 AM
 ☆ [Elisabeth's Journal](#) by Elisabeth L #575, Sat November 15, 2014, 1:19 PM
 ☆ [Justin's Journal](#) by Justin Q #576, Wed November 19, 2014, 6:57 PM
 ☆ [The journey in this course....](#) (private reply) by Clare Brett, visible to 2 people #2054, Sun Nov
 ☆ [Thanks for taking this time Clare](#) (private reply) by Justin Q, visible to 2 people #2247, Tu
 ☆ [Lorelie's Learning Journal](#) by Lorelie O #637, Sat November 22, 2014, 1:59 AM
 ☆ [Erin's Learning Journal](#) by Erin J #655, Tue September 16, 2014, 3:32 PM 👍
 ☆ [Really like your blog!](#) by Jessica K #775, Sat September 20, 2014, 4:36 AM 👍
 ☆ [Wow, this is so cool!](#) by Elisabeth L #2310, Sat November 15, 2014, 1:21 PM

4B. PUBLICLY SHARED ONLINE VS PRIVATE JOURNALS SUBMITTED TO THE INSTRUCTOR BY EMAIL OR OTHER STRATEGY.

- Advantages for publicly shared journals:
 - Public journals provide different models for other students of how their classmates took up ideas from the course
 - Consistent with an constructive pedagogical approach where learning is seen as collective, not just individual (Collective cognitive responsibility [Scardamalia, 2002])
 - Increases social presence (students more aware of whose ideas may resonate with their own)
 - Allows students to develop their own academic “voice” in a secure space: not the audience anonymity of the whole internet, nor is the audience only the teacher
- Potential problems:
 - Students can feel vulnerable sharing online
 - Requires careful early community-building and trust.

4B.SCAFFOLDED VS OPEN FORMAT QUESTION STRUCTURE

- Scaffolded questions allow instructors to have a base for comparison across the group
- Questions themselves can be models of metacognitive reflection, and thus become both a tool for instruction as well as assessment.
- Open format where students comment on things of interest to them in the course allows voice and agency for students ready to take that on.
 - Can offer choice: some entries (say 5 out of 8) can be open and the others consider a specific (but still open-ended) question(s).
 - Linking communities of practice: the course and their other studies and jobs—actively applying ideas we encounter in the course to the broader context and back again—dialogic interaction with knowledge.
- {double layered community of practice: Lee & Brett, 2013, 2015]

4B. INSTRUCTOR ASSESSED VS SELF-ASSESSMENT BY STUDENTS

- Can be hard to evaluate individual learning--not tied to specific norms or criteria--everyone starts from a different place.
- Can either
 - co-develop a rubric and have instructor assign grade
 - or have a rubric as a guide and have students contribute to it or use it to self assess and write justification.
- Data over many years suggest that students are mostly able to articulate sensible and accurate self-assessments based on a clear rubric
- Self-assessment can help students develop confidence in their appraisals of their own learning

4B.JOURNAL EXAMPLES: METACOGNITIVE INSIGHTS...

- I have in many of my university courses gone back to prior weeks and reviewed information to help me understand better, etc. *But in this course, I find that I am consistently able to better understand by literally jumping about from week to week. If an Anthropologist were to conduct an ethnographic study on how I study and learn through this course, s/he would see all the people (peers, professor, etc), artifacts and technological systems that go along with my journey to grapple with the concepts in this class.*
- Why all the red? I started to look back at my earliest journal entries and I noticed that I had been talking about a lot of the concepts in the course that I had not yet learned about at the time of my journal entry. Since I now have the vocabulary to discuss these concepts I thought I should go back through my journal to make connections between my early articulations of these concepts and my current understandings. The red font indicates the development in my understandings in this course over a period of time.
- Why all the blue? Pepper adds them automatically....These are links to relevant posts in our weekly discussions, course resources, classmates' journal entries, and other online resources. What did Dare call this? Hyperlinked travel?

4B. EXAMPLE OF A RUBRIC FOR SELF OR INSTRUCTOR ASSESSMENT OF JOURNAL ENTRIES

| | Level 1 | Level 2 | Level 3 | Level 4 |
|----------------------------|--|---|--|---|
| Frequency | Entries were infrequent and | Entries were frequent and | Entries were frequent and | Entries were regular and |
| Depth of reflection | characterized primarily by description and very limited depth of reflection (i.e. reacting to ideas from the course materials) | characterized primarily by description and limited depth of reflection (i.e., reacting to ideas from the course materials). | characterized primarily as reflective (i.e. reacting to ideas from the course materials, elaborating ideas from readings and from others' contributions) | characterized primarily as very reflective (i.e. reacting to ideas from the course materials, elaborating ideas from readings and from others' contributions, and contemplating or extending ideas from readings and from others' contributions, value added contributions) |

4B. SUMMARY RECOMMENDATIONS FOR LEARNING JOURNALS

- Learning journals can provide an effective structure to encourage metacognitive reflection among students.
- Through the use of orienting questions and/or making journals public, they can serve as peer examples of reflectivity for a wide variety of students.
- Learning journals can be instructor or self assessed. Self-assessment provides an opportunity for student to take ownership of their learning.
- Rubrics can be helpful for both student and teacher
- Orienting Questions should encourage students to make deeper connections and analyses



5. CHALLENGES OF ASSESSING PARTICIPATION ONLINE

- How do we measure learning: Grades? Final papers? A pre/post content test? Learning portfolios? Other measures?
- The field often uses other “proxy” measures either instead or with those, including:
 - Student perceptions of learning,
 - Student satisfaction,
 - Levels of online activity including quality and amount of what is posted (also logons, time online, sessions, reading, re-visiting etc.
- Each have some value but sometimes hard to figure out what is most useful for which contexts.....ongoing challenge in the field
- We look at different measures of interaction as one important factor in assessment

5. THINGS TO REMEMBER....

- Use additional technologies when you can identify the **value-added effect** for the learning you are supporting
- Be aware of **the relationship between the technology and your teaching approach**—e.g. peer discussion— can lead in multiple directions.
- **Start small** and become familiar with particular technologies in a defined context for a specific outcome. *E.g. What is the goal of the collaboration in this task?*
- A continuum from blended or hybrid learning-----to fully distance courses of **increasing need for clarity of learning goals and consistent student support**.
- Remember to give students a set of social rules —**Netiquette-for how you interact in written (and oral) online settings**. Just like in email, and even some synchronous environments, **tone is very important** because f2f cues are less clear, so extra effort is required to convey affect and attitude.

ITS HARD TO GET PEOPLE ALL FACING IN THE
SAME DIRECTION.....PARTICULARLY IN VIRTUAL
SPACE

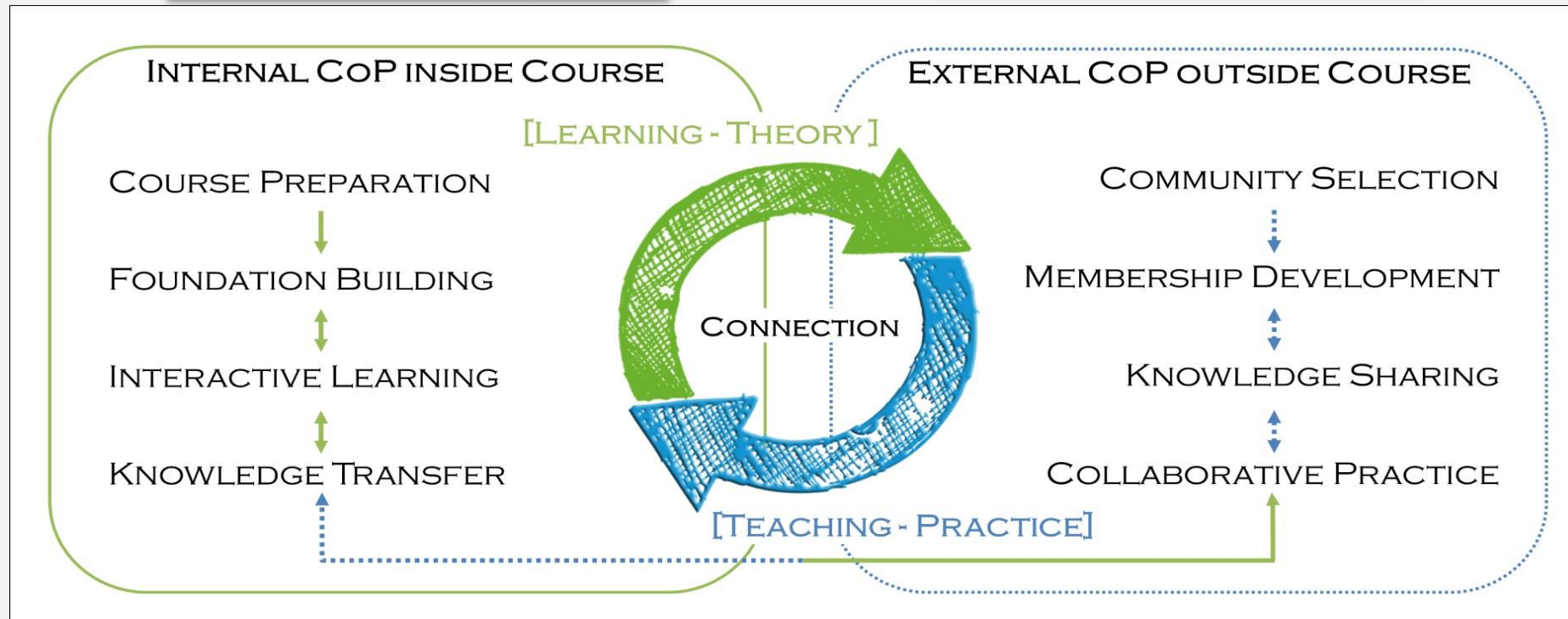


Don't forget to use
HUMOUR!
To bring people together;
to defuse stress; to change
the focus.....

* ONLINE COURSE DEVELOPMENT MODEL

Online TPD Courses

CoP



Lee, K., & Brett, C. (2015). An online course design for inservice teacher professional development in a Digital Age: The effectiveness of the double-layered CoP model. In M. L. Niess & H. Gillow-Wiles (Eds.), *Handbook of Research on Teacher Education in the Digital Age*. Hershey, PA: IGI Global.

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