Building Educator Capacity through Evidence-Based Professional Development Strategies

Martin H. Smith, MS, EdD
Department of Population Health & Reproduction
UC-Davis School of Veterinary Medicine
University of California Division of Agriculture and Natural Resources
Words of the Day

- Systematic
- Intentional
- Aligned
Educator Professional Development

- Student learning requires effective teaching.

- Effective professional development advances educators’ skills and confidence.
Need for Effective Professional Development of Educators

- Professional development for educators needs improvement; it is one of the most pressing and challenging issues in education today (Bissonenette & Caprino, 2014).
- Clark and Floreio Ruane (2001) call for a fundamental redesign to educator professional development.
- The most common approaches to educator professional development are characterized as “one-shot, fix-‘em-up experiences” (Fleischer & Fox, 2003, p. 259). These approaches are considered ineffective; they are fragmented, lack educator-centeredness, and are decontextualized (Penuel et al., 2007).
- A collective dialogue among faculty is needed to change practice (Anderson et al., 2011). There is value in the conversation...

(Note: Hold this thought.)
Considerations for an “Inside-Out” Approach to PD

**Painting a Picture:**

- Educators often **feel isolated in their practice**, which is detrimental to their continued learning and development (Lieberman & Mace, 2010; Niesz, 2007).
- Despite being well intended, educators typically view most professional development as fragmented, disconnected, and irrelevant to their practices (Lieberman & Mace, 2010).
- Educators’ knowledge arises from their problems of practice, which are detailed and authentic (Lieberman & Mace, 2010).
- Educators **thrive in collaborative environments** (Hunzicker, 2010).
- Focus professional development efforts should be advancing practice to **improve learner outcomes** (Bissonnette & Caprino, 2014).
- **Educator-led professional development** informs improved instructional practices (Bissonnette & Caprino, 2014).
Effective (Reform-Based) Educator Professional Development

Characteristics:

- Extended duration
- Active learning; educator-centered; collaborative
- Pedagogical knowledge
- Content knowledge
- Authentic context
- Use of data
- Connections to broader organizational and systemic efforts

See: Smith & Schmitt-McQuitty, 2013:
http://ucanr.edu/repositoryfiles/ca6701p47-99930.pdf
Communities of Practice (CoPs)

- Communities of Practice (CoPs) represent a mode of professional development whereby educators are working with other educators, rather than experts working on educators (Wenger, McDermott, & Snyder, 2002).

- Educators learn in practice (by doing), through meaning (learning is intentional and authentic), and through participation with others (social engagement) and through identity development (learning and changing who they are as practitioners) (Lave & Wenger, 1991; Wenger, 1998).

- It is a process whereby practice is made public; it is data driven; and it is contextualized (Lieberman & Mace, 2010).

- Considered to be a transformative approach to educator professional development (Lieberman & Mace, 2010).

   CoPs have “become a worldwide focus” for educator PD (Lieberman & Mace, 2010, p. 79).
Communities of Practice

“...groups of people who share a concern, a set of problems, or a passion about a topic, and who deepen their knowledge and expertise in this area by interacting on an ongoing basis” (Wenger, McDermott, & Snyder, 2002, p. 4).

Theoretical underpinnings: **constructivism; situated learning; and reflective practice.**
Communities of Practice

- **Individuals enter into CoPs on the periphery;** through time, the level and complexity of their interactions increases and they move more to the center. Referred to as **legitimate peripheral participation** (Lave & Wenger, 1991; Wenger, 1998).

- CoPs provide a forum to **mentor novices** (Wenger, McDermott, & Snyder, 2002).

- Structure offers educators continued **motivation, acknowledgment, and support** for self-development efforts (Mycue 2000).
How to Develop a CoP

**Domain**
- What topics and issues are we going to address?
- Connection to the organization’s strategy?

**Community**
- Who are members? What roles will they play?
- How and how often will we meet?
- Community norms and ground rules?

**Practice**
- How will the CoP be proactive in taking charge of the development of its practice?

(Wenger, McDermott, & Snyder, 2002)
CoP Type: Lesson Study

- Focus of Lesson Study Groups is on existing lessons/activities/curricula (see Lewis, 2002).
- Educators work collaboratively to refine or adapt existing lessons to their settings, programs, and learners.
- Accomplished through thoughtful and informed reflective practice that occurs over a period of time.
- Use information from previous lessons to plan subsequent lessons. Reflective practice.
- Educators collect and analyze information (formative data); use data from their learners to improve their practice. Reflective practice.
- **Summary:** Educators make informed, “data-driven” decisions about their instructional practices over extended periods of time.
The Model - Lesson Study

- Learning Objectives
  - Background Data

- Formative Data
  - L1
  - L2
  - L3
  - L4
  - L5

- Post-Tests
  - Youth CM
  - Adult CM

- Data Inform

- In-Person PD:
  - Content
  - Pedagogy
  - PYD

- New Lesson Study Groups

- Online PD:
  - Content
  - Pedagogy
  - PYD
CoP Type: Action Research

- Focus of Action Research Groups is on a particular issue within the learning environment (a “burning question”) as a means to improve practice (see Bissonnette & Caprino, 2014).

- Pose a question; collect and analyze information from various sources. Reflective practice.

- Develop a plan to address finding; implement the plan and collect additional information. Reflective practice.

- Keep, revise, or alter plan. Reflective practice.

Summary: Educators make informed, “data-driven” decisions about their instructional practices over extended periods of time.
CoP Type: Professional Learning Community (PLC)

- “Ongoing groups... who meet regularly for the purposes of increasing their own learning and that of their [learners]” (Lieberman & Miller, 2008, p. 2).
- A forum for sharing; participants engage in dialogue and critique.
- Guide reflection on teaching through reflection on learning.
- Engage in observation, problem solving, mutual support, advice giving, and peer teaching and learning.
- Make data-driven decisions through reflective practice.
- Develop a core set of strategies to connect their learning to targeted learner outcomes.

Summary: Educators make informed, “data-driven” decisions about their instructional practices over extended periods of time.
Benefits of CoPs

- Educators:
  - Make *informed decisions* about their instructional practices.
  - Become *reflective* in their work.
  - Grow to become *purposeful* in their instructional choices by being *systematic* and *intentional* in their CoP.
Benefits of CoPs

- CoPs offer educators continued motivation, acknowledgment, and support of self-development efforts (Mycue 2000).

- Participation in CoPs often saves time later; increases participants’ confidence; and advances knowledge and skills of participants and organizations (Wenger, McDermott, & Snyder, 2002).

- CoPs provide a forum to mentor novices (Wenger, McDermott, & Snyder, 2002).
Benefits of CoPs

- Educators’ enhance their abilities to facilitate reform-based learning strategies with their students.
  *Must experience reform-based practices to understand how to facilitate them.

- Promotes understanding of student thinking and misconceptions. (Note: Misconceptions are a challenge re. inquiry-based learning.)

- Promotes collegial interactions.
Challenges of CoPs

- **Shifting our perspective:** Moving from the idea that mastery resides with the experts to mastery residing within the members of a CoP (Lave & Wenger, 1991).

- **Time:** Making a *longer-term commitment* to a form of open-ended professional development (Buysee, Sparkman & Wesley, 2003).

- **Sustaining the CoP over time:**
  - Potential – Discovering common ground
  - Coalescing – Launch a CoP; build relationships and trust; create routines
  - Maturing – Form identity; take charge of practice and grow
  - Stewardship – Established group; add new members; voice of influence
  - Legacy – Let go; define legacy; remain in touch
Challenges of CoPs – Higher Ed.

- **Reward Structure:** IHEs do not traditionally reward teaching; research and publications are emphasized re. tenure decisions.

- Unfamiliarity with **Reflective Practice** as it pertains to teaching.

- College-level teaching is typically **on-the-job training**; departmental cultures are strong influences as to how faculty develop and teach courses.

**Note:**

- Anderson et al. (2011) recommend formation of faculty study group as one strategy to improve teaching.
- Further, some universities have formed centers and/or programs to promote improved teaching and learning (e.g., RTA).
Size of a CoP

- Some CoPs are small; some are large(r).
- Key points to consider relative to CoP size (Wenger, McDermott, & Snyder, 2002):
  - A critical mass is needed to sustain interactions and provide multiple perspectives.
  - Groups that are too large can inhibit direct interactions among participants.
Recommendations for Effective Operation of CoPs

- **Communicate clearly and listen carefully – egalitarian discussions are ideal.** Remember: Everyone, regardless of his/her level of experience, can make valuable contributions to the lesson study process.

- **Shared ownership and responsibility.** A CoP is a collaborative endeavor that is meant to improve learners’ knowledge and skills through a joint effort among educators.

- **Emphasis is on the learners, not the educators.** Focus on the learning and development of the target audience. Let the data “speak to you”; discover “ah ha” moments.

- **Share your views willingly, but respect the views of others.**

- **Ask and welcome questions for clarification.**

- **Be open to new ideas and views.** Change happens!

- **Make time commitments; honor time commitments; honor time limits.**

- **Set goals; achievable objectives week to week; remain on task.**
Forums for CoPs

- In-person
- Online (synchronous; asynchronous)
- Blended learning opportunities
Evaluating a CoP

- Systematic data collection and analysis are key to guiding capacity building (Floden et al., 1995).

- Proposed strategy: explanatory sequential mixed methods design (Creswell & Plano Clark, 2011).
  - Quantitative and Qualitative strands

- Quantitative data to assess development with respect to key constructs (common across all CoP types).

- Follow-up qualitative data to gain a deeper understanding of the progress of CoP participants.
Evaluating a CoP

Phase 1: Quantitative Strand
Survey-Based Data Collection on Key Constructs:

- **Pedagogy**
  - The Use of Inquiry Practices survey (Smith, 2013), an instrument adapted from the Inquiry-Based Instruction in Secondary Science Classrooms (IISSC) survey used by Gejda and LaRocco (2006), will be used to assess the inquiry-based instructional practices.

- **Disposition**
  - The Teacher Disposition Index (Shulte et al., 2005), which is a validated instrument that addresses two constructs: Learner-Centered Disposition and Professionalism; Curriculum-Centered Disposition.
  - This tool would be modified slightly to reflect the appropriate terminology of the 4-H context.
**Evaluating a CoP**

**Phase 2: Qualitative Strand**

Interview-Based Data Collection:

- Trends in survey data will inform interview question development.
  - Goal is to take a “deeper dive” into application of pedagogical methodology and disposition (and content if desired).
  - Since main constructs (pedagogy and disposition) are consistent across contexts, sample banks of questions could be developed to help guide interview structure.
  - Themes in interview data can be extracted using Constant Comparison Analysis (Hatch, 2002).
Questions?
Contact Information

Martin H. Smith, MS, EdD
Specialist, Veterinary Medicine Extension
Department of Population Health and Reproduction
3213 VM3B
University of California
1089 Vet Med Drive
Davis, CA 95616
530-752-6894
mhsmith@ucdavis.edu