Creating a Supportive Virtual Environment for Geographically-Dispersed Colleagues

**Setting:** The Training Support Division (TSD); which is comprised of the New Systems Integration, Learning Innovations, and Faculty & Staff branches at the Fort Gordon Cyber Center of Excellence (CCoE). Each branch bears responsibilities pertaining to training development, management, or support services for an array of internal and external CCoE stakeholders. These employees train CCoE faculty/staff, create gaming/simulation training products, conduct pre-implementation evaluations of training for new systems, conduct research and studies on future innovations, and coordinate education outreach activities with local/regional education institutions, among other things.

**Participants:** Approximately 40-50 military and civilian employees of varying education and experience levels. Each person’s role falls within the scope of an instructional systems specialist, training analyst, training developer, subject matter expert, or training support manager. Military (and some contractor) employees typically serve a 1 ½ to 3 year-term assignment in TSD, while civilian counterparts hold permanent positions.

**Problem of Practice:**
- Department experiences high employee turnover—resulting in continual need to train and engage newcomers.
- Existing career field program overemphasizes individual discovery of professional development opportunities.
- No formal orientation training or local TSD program/strategy for addressing dynamic PD needs.

**Theories Guiding Research:**
- Social Cognitive Theory (Albert Bandura)
  - Social Cognitive Career Theory
- Community of Practice Theory (Jean Lave & Etienne Wenger)
  - Virtual Community of Practice

**Innovation:** A Virtual Community of Practice (VCoP) — consisting of a central website portal where employees can asynchronously exchange knowledge and access a range of career development resources. At its core, the VCoP serves as a repository where content is stored and made available for knowledge access/exchange. All participants are (at a minimum) provided basic user privileges; which includes read access to all areas within the site, limited document and video upload rights, the ability to ask/answer questions, and post status updates, pictures, and videos.

**Researcher Role:** Participant Observation

**Research Questions:**
1. How are TSD employee professional development goals impacted by being members of a VCoP?
2. How and to what degree does VCoP membership affect TSD employee participation in knowledge exchange?
3. In what ways does being a VCoP member affect TSD employee self-efficacy?
Creating a Supportive Virtual Environment for Geographically-Dispersed Colleagues

**Methodology:** Convergent Parallel Design

*Data Collection*

Constructs: (1) Usability (2) Professional Development (3) Knowledge Exchange (4) Self-Efficacy

**Qualitative**
- Semi-Structured Interviews
  - 1-on-1

**Quantitative**
- Digital Activity/Behavior
- Questionnaire (5-Point Likert)

*Data Analysis*

- Line-by-Line Coding
- KE, PD, SE categories
- Axial Coding
  - Action/Interactions
  - Conditions
  - Consequences
- Memo Writing

- Analytic Reports
  - Activity
  - Content Creation
- Descriptive Statistics
- Chi-Square Analysis

*Findings*

Member activity reports showed user activity initially ascending throughout the first month of the VCoP’s implementation. However, activity levels dropped sharply soon after, and a positive spike in activity didn’t occur until new content additions were in the third month of implementation.

**Question #1** results revealed VCoP members generally agree the VCoP’s professional development focus interests them; helped them find information they normally wouldn’t find on their own; helped integrate learning into their work life; was useful for locating mandatory training; and promoted collective knowledge building. Qualitative findings suggested members also revealed members thought using the VCoP can help career advancement.

**Question #2** results indicated members believed the VCoP drove willingness to participate in peer development; helped build relationships; contributed to their sense of belonging; motivated them to share knowledge; provided access to expertise; and strengthened collaboration across TSD. Qualitative results revealed members had difficulty engaging with one another but believed the VCoP could potentially improve discourse.

**Question #3** results showed members believed work habits could benefit as a result of participating in the VCoP, and that both individual and team-based projects could be completed more efficiency and with higher quality. Qualitative results indicated members believed the VCoP could help them in their current role/responsibilities, and the addition of more job-focused content could improve their work quality.

**Chi-square tests of independence** showed that member frequency of use is more than likely unrelated to members’ belief in the VCoP’s ability to help them accomplish professional development goals; whether they will be motivated to share work-related knowledge; or belief in their ability to produce higher quality work on individual projects.