

## **A 360-Degree Assessment Model that Fosters Professional Skills Development in Doctor of Physical Therapist Students**

**Abstract:** Successful transition from academia to the workplace requires that college graduates acquire both field specific technical knowledge and professional skills. Research indicates that employers expect graduates to possess basic knowledge as well as professional skills, and the reality is not matching the expectation. Identified missing essential professional skills include: teamwork, critical thinking, communication, personal accountability, and effective work habits. Higher education faculty members are challenged to design pedagogy that explicitly teaches and rewards student development of professional skills crucial for cooperative education and workplace success. One hundred and four Doctor of Physical Therapy students participated in a study using an intervention designed to facilitate the development of professional and communication skills. The intervention was a 360-degree assessment Model (Model) pedagogy that relied on standardized patients (SP) augmented by online communities of practice to teach and evaluate student development and integration of professional skills. SPs are laypeople trained to mimic a patient depicted in a case study. Feedback from cooperative education employers on current workplace needs and desired learning traits was incorporated into the development of SP cases. Students self assessed their professionalism using the Professionalism Physical Therapy Core Values (PPTCV) instrument. Pre versus post intervention comparisons of professional skills were conducted using paired t-tests. Pre and post intervention comparison of the PPTCV resulted in a statistically significant increase in students' perception of professional skill development  $p=0.01$ . More research is indicated to examine the Model's longitudinal effectiveness and wider application in promoting student professional skill development.

## **Introduction**

Successful transition from academia to the 21<sup>st</sup> Century workplace requires college graduates to have technical skills in their field and professional skills for effective interactions (McLester & McIntire, 2008). Employers expect young adults to arrive with a core set of basic knowledge and the ability to apply these skills in the workplace. However, the expectation is not being met. Two suggestions to improve professional skills development are to: 1) teach applied skills integrated with academic content; and 2) include members of the business community in defining skills required by graduates (McLester & McIntire, 2008).

Because most college-aged students are entering adulthood, the attitudes, interests, values, and character development that underlie their behaviors may not be at a professional level (Hayward, Noonan & Shain, 1999; May, Morgan & Lemke, 1995). For example, novice PT students often lack appreciation for a patient's perspective during a provider interaction, "yet this skill is an essential part of the professional skills that leads to successful patient outcome" (Hayward, Noonan & Shain, 1999, p. 37). Similar to graduates in other professional programs, successful Doctor of Physical Therapists (DPT) require strong technical and professional skills. Seven values underpin the profession: accountability, altruism, compassion and caring, excellence, integrity, professional duty, and social responsibility (American Physical Therapy Association, 2003).

Cooperative education (co-op) provides an opportunity to foster the academic knowledge transfer required for entering the workplace (Hayward, Raelin & Blackmer, 2007). Research is needed to examine the integration of academic and experiential learning (Hayward, Raelin & Blackmer, 2007; Raelin, Glick, McLaughlin, Porter & Stellar, 2008; Schutte, 2007). Higher education faculty members are challenged to design pedagogy that explicitly teaches and rewards student development of professional skills crucial for co-op and workplace success.

## **Theoretical Framework**

The purpose of our project was to examine the effectiveness of a 360-Degree Assessment Model designed to explicitly teach and reward the acquisition and demonstration of professional skills in DPT students. The Model (Figure 1) relies on standardized patients (Barrows, 1993; Black & Marcoux, 2002; Hayward, Blackmer & Markowski, 2006; Ladyshevsky & Gotjamanos, 1997; Ladyshevsky, Jones, Baker & Nelson, 2000) augmented by online communities of practice (Doty, 2002; Howard & Kennedy-England, 2001; Lave & Wenger, 1991), and opportunities for reflection. The Model provides a 360-Degree feedback loop on a student PT interaction with a standardized patient (SP). The feedback loop is a powerful tool because an individual receives performance appraisal that explicitly documents strengths and areas for development (Antonioni, 1996). The inclusion of self-appraisal or reflection promotes self-directed learning and development (Dewey, 1933; Schon, 1983).

## **Methodology**

We used a quasi-experimental, mixed methods repeat measures design. The study was guided by two research questions: 1) What professional skills in DPT students do co-op employers want? and 2) Will the Model impact student professional skill and communication development?

## **Setting and Participants**

The study was conducted in a large U.S. urban university whose educational philosophy embraces practical, experience-based learning. The University's six year clinical doctoral program in physical therapy (DPT) includes two six-month co-op work terms. Project participants were 104 (83 females) third-year DPT students and eight (4 females) co-op employers who had an average of 16 years professional experience.

## **Intervention-Protocol**

Phase one: Focus groups were conducted with eight PT co-op employers, who were purposively sampled, to determine their perceptions of student awareness of professional skills and communication in the workplace. Data were used by faculty to develop case studies for SPs to mimic. The cases were designed to challenge students to develop and apply communication skills and professional skills required for patient interviews. All 104 DPT students completed the Professionalism in Physical Therapy: Core Values (PPTCV) Survey to self-assess their professional and communication skills(American Physical Therapy Association, 2003).

Phase two: All 104 students in “Physical Therapy Professional Seminar 1,” participated in the Model intervention. Each case, with guiding questions, was posted on a Blackboard™ course website. CoPs of four to five PT students were created, through which students and faculty communicated about the case using Blackboard’s™ discussion board feature. SPs were recruited and trained by course faculty to portray each patient case. Student-SP interactions lasted 30 minutes and were videotaped. Following an SP interaction, the student received “360-degrees of feedback” from SPs, faculty, and peers who used rubric to assess professional and technical skill performance. At the conclusion of the SP-CoP interaction, students and faculty reflected together about the case and all students completed a self reflective paper.

Phase three: At course completion, all 104 students retook the PPTCV.

## **Data Collection and Analysis**

Data were collected at three points during the research project using both qualitative and quantitative research methodologies. Qualitative data consisting of co-op employer focus group transcripts were analyzed using content analysis (Miles & Huberman, 1994). Quantitative data were analyzed using paired t-tests  $\alpha$  0.05 to compare pre to post intervention scores on the PPTCV (Portney & Watkins, 2009).

## **Results**

### **Co-op Focus Group Data**

Focus group data was collected from the eight co-op employers to learn about their perceptions of professional skills required for workplace success. Qualitative data were analyzed and summarized into three major themes: basic job skills, professional skills, and learning. Within each theme, employers noted both desired and observed behaviors in DPT students. Basic job skills identified included: time management, punctuality, organization, professional dress, knowing the scope of the job, understanding the needs of the workplace, and flexibility. Deficits included: limited attention to job rhythm, poor professional appearance, cyber multitasking and excessive cell phone.

Professional skills included the ability to communicate needs and requests, be a team player, interact effectively with other people, demonstrate empathy, adapt one's communication to level of listener, and show respect for different ages and cultures. Employers also wanted students to become part of the fabric of the company. Inappropriate professional skills were poor communication, not demonstrating professional pride, and not understanding the limits of the job. The traits related to learning desired in co-op students included the ability to take initiative and be self-directed and to look at a job as an educational opportunity. Observed deficits included: lack of initiative and not turning mistakes into learning opportunities.

### **Student Survey Data**

Quantitative data consisted of pre and post intervention PPTCV survey results. Sixty-two (55 females) or (59.6%) of the 104 students completed both the pre and the posttest surveys. Pre versus post intervention paired t-test comparisons revealed a statistically significant change in the positive direction  $p=.010$ .

## **Discussion**

PT co-op employers identified three major themes of skills required for the workplace: basic job skills, professional skills, and preferred learning attitudes (McLester & McIntire, 2008). Teamwork, communication, and personal accountability have been identified as required for current workplace success by both the APTA and employers (APTA, 2003; McLester & McIntire, 2008.) These findings are critical in healthcare because compassion, effective communication, teamwork, and accountability are essential for positive patient health outcomes. Finally, employers articulated specific desired learning traits that are hallmarks of a reflective practitioner (Dewey, 1933; Schon, 1983). Inclusion of employer feedback strengthened our methodology and provided useful information for faculty on curriculum design and course objectives that are responsive to the needs of the workplace. (Harfman et al, 2008; Hutt, 1979; McLester & McIntire, 2008; Van Gyn, 1996). Increase in student awareness of core values could be attributed to inclusion of opportunities for reflection. When faculty and co-op employers incorporate opportunities for reflection, students experience enriched learning and the integration of academic and experiential education. (Daudelin, 1996; Hayward, Blackmer & Raelin, 2007; Raelin et al, 2008; Schutte, 2007; Van Gyn, 1996).

## **Conclusions**

Results indicated that the Model was successful in promoting an increase in awareness of core professional values. The Model explicitly offered constructive feedback to students on the professional skills that benefit patient treatment outcomes. Our Model may have potential applicability to other professional programs whose graduates require strong non-technical skills for workplace success. This study was exploratory, based on a small sample size, and a single discipline. More research is indicated to examine the longitudinal effectiveness of our intervention on promoting student professional skills, and the learning traits desired by employers.

## References:

- American Physical Therapy Association. (2003). Professionalism in Physical Therapy: Core Values. Retrieved September 17, 2008 from American Physical Therapy Association, Alexandria, VA. Web site: <http://www.apta.org/documents/public/education/professionalism.pdf>. Accessed 9/17/08.
- Antonioni, D. (1996). Designing an effective 360-degree appraisal feedback process. *Organizational Dynamics*, 25(2),24-38.
- Barrows, H. (1993). An overview of the uses of standardized patients for teaching and evaluating clinical skills. *Academic Medicine*, 68, 443-451.
- Black, B., & Marcoux, B. (2002.) Feasibility of using standardized patients in a physical therapist education program: A pilot study. *Journal of Physical Therapy Education*, 16(2),49-56.
- Daudelin M. (1996) Learning from experience through reflection. *Organizational Dynamics*. Sarranac Lake, NY: American Management Association.
- Dewey, J. (1933). *How we think: A restatement of the relation of reflective thinking to the educative process*. Chicago: DC Heath and Co.
- Doty, E. A. (2002). Organizing to learn: Recognizing and cultivating learning communities. *Seminars for Nurse Managers*,10(3),196-205.
- Harfmann, A., Atkins, P., Hatter, M., Kelpe, J., Krivanka, S., & Schonhardt, D.A. (2008). Class [Re]union: Course corrections in response to co-op employer feedback. *The Journal of Cooperative Education and Internships*, 42(2),9-15.
- Hayward LM, Noonan AC, & Shain, D. (1999). Qualitative case study of physical therapist students' attitudes, motivations, and affective behaviors. *Journal of Allied Health*, 28(3),155-164.
- Hayward, L.M., DiMarco, R., Blackmer B., Canali, A., Wong, K., & O'Brien, M. (2001). Curriculum based electronic peer mentoring: An instructional strategy for integrative learning. *Journal of Physical Therapy Education*,15(4), 14-25.
- Hayward, L. M., Blackmer, B., & Raelin, J. (2007). Teaching students a process for reflection: A model for increasing practice based learning outcomes while on cooperative education. *Journal of Cooperative Education*, 41(1),48-55.
- Hayward, L.M., Blackmer, B., & Markowski, A. (2006). Standardized patients and communities of practice: A realistic strategy for promoting core values in a physical therapist curriculum. *Journal of Physical Therapy Education*, 20(2),29-37.

- Hayward, L.M. (2000). Becoming a self-reflective teacher: A meaningful research process. *Journal of Physical Therapy Education*, 14(1): 21-30.
- Howard, A., Kennedy-England, E.S. (2001). Transgressing boundaries through learning communities. *Journal of Cooperative Education*, 36(1),76-82.
- Hutt, R. (1979). Eliciting feedback from cooperative education training sponsors. *The Journal of Cooperative Education and Internships*, 13(2):45-51
- Jensen, G., & Denton, B. (1991). Teaching physical therapy students to reflect: A suggestion for clinical education. *Journal of Physical Therapy Education*, 5:33-38.
- Ladyshefsky R, Gotjamanos, E. (1997). Communication skill development in health professional education: The use of standardized patients in combination with a peer assessment strategy. *Journal of Allied Health*, 26 (4),177-186.
- Ladyshefsky, R., Jones, M., Baker, R., & Nelson, L. (2002) Evaluating clinical performance in physical therapy with simulated patients. *Journal of Physical Therapy Education*, 14(1),31-37.
- Lave, J., & Wenger, E. (1991). *Situated learning: Legitimate peripheral participation*. Cambridge, UK: Cambridge University Press.
- May, W.M., Morgan, B., Lemke, J.C, et al. (1995). Model for ability-based assessment in physical therapy assessment. *Journal of Physical Therapy Education*, 9(1),3-6.
- McLester, S., & McIntire, T. (2006). The workforce readiness crisis. Retrieved, October 18, 2008 from Technology & Learning. Website: <http://www.techlearning.com/showArticle.php?articleID=193700630>
- Miles, M.B., & Huberman, A.M. (1994). *Qualitative data analysis*. Thousand Oaks, Calif: Sage Publications.
- Portney, L.G. & Watkins, M.P. (2009) *Foundations of clinical research: Applications to practice*. 3rd Ed. Upper Saddle River, NJ. Prentice- Hall, Inc.
- Raelin, J.A., Glick, L.J., McLaughlin, K.E., Porter, R.D., Stellar, J.R. (2008). Reflection in action on co-op: The next learning breakthrough, *Journal of Cooperative Education*, 42,16-33.
- Rossmann, M.H. (1999). Successful online teaching using an asynchronous learner discussion forum. *Journal of Asynchronous Learning Networks*, 3,41-53
- Schon DA. (1983). *The reflective practitioner: How professionals think in action*. New York, NY: Basic Books, Inc.

Schutte, K. (2007). Journey or destination: A study of experiential education, reflection and cognitive development. *Journal of Cooperative Education*, 41(1),117-128.

Shepard, K.F., & Jensen, G.M. (1990).Physical therapist curricula for the 1990s:educating the reflective practitioner. *Physical Therapy*, 70:566-577.

Van Gyn, G.H. (1996). Reflective practice: The needs of professions and the promise of cooperative education. *Journal of Cooperative Education*, 31(2),103-131.