Advancing the Research Culture at Seattle Pacific University: Training Local Clinical Scientists
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Seattle Pacific University (SPU) offers a PhD in clinical psychology that adheres to the Local Clinical Scientist training model, an extension of the scientist-practitioner model, stressing that research and practice are not separate constructs but reciprocal and necessary components of each other. To this end doctoral students at SPU participate in multiple research and clinical training opportunities throughout their program. Students participate in research with their faculty advisor throughout their four years on campus. They also complete a group research project as part of an integrated statistics and research methodology sequence that spans four quarters during Year 1 and 2. These opportunities culminate in an empirical test of a theoretical model for their dissertation. This focus on research in the program is not an end in itself but rather to implement the Local Clinical Scientist training model to develop competent Clinical Psychologists who are able to integrate Christian spiritual perspectives into their care of diverse persons.

As noted by its mission statement, “Seattle Pacific University seeks to be a premier Christian university fully committed to engaging the culture and changing the world by graduating people of competence and character, becoming people of wisdom, and modeling grace-filled community” (Seattle Pacific University, 2004-2005, p. 2). The phrase, "engaging the culture and changing the world," denotes an intent to serve humanity in the name of the triune God. It also denotes reciprocity between sacred and secular: engagement indicates relationship, wherein all parties affect each other. This has proved to be the case with the Clinical Psychology program, particularly with the faculty’s efforts to foster a research culture in the program and to participate in the broad marketplace of psychology scholarship. Faculty within the Clinical Psychology program engage in research and other forms of scholarship in order to change the world for the better.

Seattle Pacific University’s (SPU) PhD in Clinical Psychology is housed within the School of Psychology, Family and Community’s Department of Graduate Psychology (DGP), one of seven schools that comprise the university. The School of Psychology, Family and Community (SPFC) also contains undergraduate psychology and the masters program in Marriage and Family Therapy. In 1995 SPU accepted its first cohort of doctoral students, offering a PsyD in Family Psychology. In 1997 the program was modified to a PhD in clinical psychology to reflect a broader biopsychosocial and clinical emphasis in the curriculum, faculty research interests and more exacting dissertation expectations.

In 2001 the program was further modified, becoming a full-time five-year program with an updated curriculum comprising experiences that are cumulative, graduated in complexity, and designed to prepare students as psychologists who can succeed in academic as well as clinical settings. The program follows a cohort model where students are required to complete four years of sequential academic coursework within a four-quarter academic calendar, including two years of part-time clinical practicum training (during Years 3 and 4 of the program), plus one full-time year of internship (2000 hours) in professional psychology during Year 5. There is some flexibility during their fourth year to take electives and complete a health, family or organizational cognate of courses. Students earn the MA degree after Year 2 en route to their PhD degree. The program accepts approximately 15 students each year. While some enter after earning an MA degree, the majority enter the program after completing their BA or BS degree.

The Department of Graduate Psychology consists of seven full time core faculty members, six of whom have tenure-track appointments. Five additional faculty members from the other SPFC departments teach and supervise doctoral research. There are also three adjunct faculty in
simplified fields of clinical psychology who have taught for several years in the program, providing consistent coverage to diverse areas in the curriculum.

The administrative leadership consists of the Department Chair, Director of Clinical Training and Director of Research. It is interesting to note that the Director of Clinical Training is a productive researcher and the Director of Research focuses on the clinical applications of psychological science. Likewise the Department Chair is an active clinician as well as academic scholar.

Research resources on campus include a suite of laboratories that are specifically designed to accommodate research and training in family, developmental, social, physiological and comparative psychology. All public-access computers on campus have SPSS and AMOS statistical software packages. In addition, SPU is part of a University Library consortium with access to over 22 million books and journals.

The faculty have diverse research interests including issues surrounding the meaning and behavioral influences of faith. Scholarship topics include (a) neuropsychological and psychosocial aspects of acquired brain injury; (b) forgiveness in children; (c) spirituality and the meaning ascribed to chronic pain; (d) impact of negative life events or trauma on religiosity; (e) ego strength and clergy affairs; (f) theology and epistemology and (g) the role of religious faith in work-life balance. However, we do not see a large distinction between Christian and non-Christian scholarship (Jeeves, 2004; Polkinghorne, 1995), so that faculty participate and present research in multiple professional organizations such as the American Psychological Association (APA), American Psychological Society (APS), Society for Research in Child Development, Society of Behavioral Medicine, International Neuropsychological Society and the Society for the Exploration of Psychotherapy Integration.

The Clinical Psychology PhD Program at SPU is designed to provide education in professional psychology in accordance with the Local Clinical Scientist (LCS) model of doctoral education, (Stricker, 1997, 2000, 2003; Stricker & Trierweiler, 1995; Trierweiler & Stricker, 1998). We view the LCS model as an integration of professional ideals and practical methods that elaborates the original Boulder scientist-practitioner (BSP) model of clinical psychology (Rainey, 1950). At the same time, we see the LCS model as extending the BSP model to encompass broader concepts of science to include a scientific approach and inquiring attitude that includes curiosity, skepticism, hypothesis testing and reframing within the local setting (Schön, 1983; Stricker, 1997).

Like the phrase scientist practitioner, the phrase clinical scientist reflects our commitment to psychology as both a scientific discipline and a healthcare profession. The concept of local, in the LCS model developed by Trierweiler and Stricker, refers to the particular application of general science, within local cultures, including the idiographic aspects of persons, families and communities, in specific space-time and relational contexts.

Based on this orientation, and in conjunction with the University mission statement, the department's mission statement reads that: as a community of scholars and professionals who embrace a broad Christian worldview, we are committed to developing psychologists who: (a) integrate the findings of scientific psychology with the interpersonal skills and sensitivity necessary for effective clinical practice; (b) incorporate biopsychosocial and spiritual perspectives into the science and practice of the discipline; (c) appreciate and respect the inherent diversity that characterizes individuals and groups, and (c) embrace a vocation of service to individuals, families and their communities.

The program adopted the LCS training model in 2000 as an intentional strategy to build a research culture within the doctoral program and to articulate a core belief in our program that the distinction between science and practice is a false dichotomy. Following the LCS model we do not distinguish between clinical researchers and practitioners among faculty. Instead we strive to integrate research and clinical practice, emphasizing a reciprocal model where prior research informs clinical practice and effective practice informs subsequent research (see Kazdin, 2003). Given our LCS training model, we emphasize this integration between science and practice by promoting an evidence-based approach to clinical assessment and psychotherapy. Believing that psychological science and practice influence each other, we seek to incorporate the use of psychological science and scientific modes of analysis in
students’ clinical education, and address issues of clinical relevance in research. Additionally, faculty incorporate peer-reviewed empirical evidence and the results of their own programs of research into the classroom experience.

As part of our research culture, all doctoral students participate as research assistants for their faculty advisor’s program of research. As we redesigned our residence-based curriculum, it was clear that we needed to be more intentional in advising, mentoring and providing research experience outside of the classroom and in addition to the dissertation. Subsequently in 2001, each core faculty member formed a Research Vertical Team (RVT; Hughes et al., 1993). RVTs meet weekly to work on and/or review the status of research projects associated with the faculty member’s program of research. Each RVT is comprised of 1-3 students in each of the Year 1 through Year 4 cohorts (hence the term “vertical”). During RVT participation in Year 1 and 2, students are expected to gain hands-on research skills by working on their advisor’s program of research. This may include literature reviews, data collection, analysis and writing for presentation and publication. The more experienced students may guide newer members of the team, often supervising lab or field work. Students are expected to dedicate five to eight hours weekly to their RVT.

The RVT’s also provide an opportunity to mentor and advise students. Prior to the introduction of RVT’s into the program, students who were experiencing personal or academic difficulty could fade from the program without their advisor’s knowledge. However with weekly meetings faculty are more knowledgeable about issues in students’ lives leading to more timely communication and intervention in a variety of areas beyond research advisement.

Students are assigned an advisor when they enter the program and participate in their advisor’s RVT but are welcome to visit or participate in other RVT’s. At the end of their first year, students permanently join an RVT and the faculty member becomes their permanent advisor, transitioning to their dissertation chair during Year 3. Topics for the dissertation often arise out of future research considerations from the advisor’s research program. Subsequently, we provide a seamless transition for students to begin work on their dissertations.

The RVT’s are an unequivocal success. Since their inception, all core faculty have co-presented with multiple students at international, national and regional conferences. For example, during the 2003-2004 academic year 24 students were coauthors with faculty on 17 presentations stemming from work in their RVT. Prior to the 2001 academic year, student participation in research presentations was negligible. Having students as research associates also boosts the productivity of faculty members. On average, faculty are able to present papers and submit articles for publication to peer review journals annually with many of the recent papers coauthored with students. In addition to collaborating with students, faculty research tends to be interdisciplinary, collaborating with faculty in the SPU Schools of Education, Health Sciences and Business and with faculty at other institutions.

In addition to their RVT research experience, all students complete a five-course statistics and research methodology practica with an additional 1-credit course on faith, meaning and epistemology. Typically, doctoral students begin their research and statistics courses at the very beginning of their doctoral training. We decided to start the sequence at the end of the first year so that we could parallel the second year clinical and psychotherapy coursework with research and statistics to make them more complementary. During Year 1 we focus on theory and foundational courses. In Year 2, students complete pre-practicum and assessment coursework as well as the majority of their research and statistics coursework. During Year 3, they are expected to bring a researcher’s attitude to more applied coursework in CBT, psychodynamic psychotherapy and family/system approaches to treatment as well as beginning two one-year practicum placements in regional, medical and mental health centers.

The statistics and research sequence begins during the fourth quarter of Year 1 with an Introduction to Statistics course that focuses not only on basic statistical concepts but, based on the recommendation of Wilkinson and the APA Task Force on Statistical Inference (1999), emphasizes the importance of interpreting confidence intervals, effect sizes, and clinical significance. In addition students begin to develop data analytic strategies using statistical software (e.g., SPSS). They also write a review article that could be submitted to the Journal of Professional Psychology suggesting how doctoral training in statistics should introduce the topics of null hypothesis testing and balancing testing for statistical signifi-
cance with examination of effect sizes and clinical significance.

This first statistics course is followed by a three-course integrated statistics and research methodology sequence which we introduced in 2001. Though research and statistics classes are often taught separately in graduate programs, this artificial division in the coursework loses the synergy of these topics in actual clinical research. The purpose of this sequence is to combine topics in research and statistics across a three-quarter sequence to give doctoral students the optimal combined skill set to be able to design and evaluate research in consideration of the appropriate statistical and research methodologies. In addition to research methodology and statistical skills, groups of 2-4 students complete independent research projects during the three-course sequence that are expected to be submitted for peer-review presentation and/or publication. Typically there are approximately five research groups among 15 to 20 students enrolled in the yearly sequence. Although these research projects are supervised by the sequence professor, they are solely co-authored by the students. Students are welcome to research any topic within psychology as long as they can complete the design, data collection and analysis over the nine months allotted to the three-quarter sequence. Subsequently, students are discouraged from designing projects where data collection could take several months or from conducting longitudinal research.

The first course emphasizes advanced topics in analysis of variance with introductions to clinical research methodology and the local clinical scientist training model. Students are exposed to the more recent promotion of evidence based treatment and the controversy surrounding the importation of results from controlled clinical trials into the clinical setting (Goode, 2004; Nathan, Stuart & Dolan, 2000). Student groups compile an annotated bibliography and write the first draft of the introduction and proposed methodology section for their projects. During the same quarter, they take a 1-credit course on faith, meaning and epistemology which considers theological and philosophical approaches to epistemology and explores the conceptual bases of the scientific method upon which much of the field of psychology rests.

The second course emphasizes topics in multiple regression, introductory psychometrics, ethics, Institutional Review Board (IRB) applications, and data collection methodology. During this quarter students submit their IRB application for their research project and begin to collect data.

The third course covers topics in multivariate statistics, including multivariate analysis of variance (MANOVA), cluster analysis, discriminant function analysis, structural equation modeling, meta-analysis and more advanced data analytic strategies for non-linear data. Students evaluate the efficacy of published clinical research that incorporates advanced statistical methods in addition to completing the data analysis and write-up of their own projects. At the end of this course the student groups are expected to submit their research paper to a conference presentation and/or journal for publication. They also present the paper at the School of Psychology, Family and Community's annual research conference which is held each spring. Students complete their research and statistics course work with a test construction and psychometrics course during Year 3.

Two cohorts have now completed the sequence and have submitted proposals (usually for poster sessions) based on their group papers to regional or national conferences, such as the APA and Western Psychological Association conferences. Nine of the ten groups have presented their papers over the past two years. In addition, several projects are currently under peer-review for publication.

The dissertation process begins during Year 3 after successful completion of the statistics and research methodology sequence and comprehensive exam. Students begin to work independently on their dissertation proposals and may also continue to work on their advisors' projects as part of the RVT. Though ideas for dissertations often coalesce after working with their RVT for the first two years, students do not conduct faculty research for their dissertations.

All dissertations are empirical tests of theoretical models. Whereas students may conduct qualitative or quantitative investigations, most students choose to complete quantitative studies. Students are discouraged from collecting only pencil-paper self-report measures as part of their model testing. Instead they are encouraged to conduct experiments, quasi-experiments or collect data in multiple modes and from multiple sources to avoid spurious results based on the limitations of self-report and common method variance. Students are discouraged from exclusive use of undergraduate students as research
participants because of the lack of ecological validity with most clinical topics. Rather they are encouraged to focus on community-based research, in keeping with the LCS model. They often collect data in locations that have an ongoing relationship with their RVT. Students may use archival data but the majority collect and analyze their own data sets.

Students are expected to defend their dissertation proposals during Year 3 in order to apply for internship during the fall of Year 4. While we require students to have passed their comprehensive exam and dissertation proposal defense as a prerequisite for applying to internship, we also have an informal goal for students to have at least two presentations or publications as part of their vitae when applying for internship; one stemming from their work in the RVT and the other from their group project in the research and statistics sequence. Approximately 10 of the students applying for internship during the fall of 2004 will have multiple presentations. Additionally, students are also encouraged to present and/or publish their dissertations, but it is not a requirement for the degree. Over the past two years 10 graduates have presented their dissertations at conferences after graduation and several have submitted them for publication.

There are several strengths and challenges facing the Department of Graduate Psychology at SPU. One key strength is the School of Psychology, Family and Community’s commitment to develop a strong culture of research across all three departments. For the last two years SPFC has hosted an annual spring research conference, where students have the opportunity to present research proposals or findings. The conference is open to all SPFC doctoral, master’s, and undergraduate students, albeit the doctoral students avail themselves most of the opportunity. The spring 2004 conference saw over 70 students in all three programs presenting research in which they were the primary authors. At the same time, the university has stressed a culture of faculty scholarship, creating, for instance, a Center for Scholarship and Faculty Development.

One of the challenges is the acquisition of research funding and graduate scholarships. As we have increased the research and scholarship expectations of our students, it becomes more difficult for them to work even part time and excel in the program. This has led to an increase in grant applications to external agencies on the behalf of faculty and students; however, additional funding has not kept up with the needs associated with the increased level of research.

Prior to the introduction of the RVT and statistics and research methods sequence, students rarely attended or presented their research at conferences. They were equally unlikely to submit articles for publication. In the last three years we have seen an upsurge in the number of presentations at conferences. In 2002-2003, 25 students were part of 20 presentations. That number increased during the 2003-2004 academic year, with 37 students taking part in 27 presentations. Our current goal is to work with students to submit these presentations for publication and increase the number of student and faculty co-authored publications.

This upswing in student and faculty research is not an end in itself, however. Our goal in increasing student awareness and participation in research is threefold: to increase their own personal research skills, to encourage them to participate in the larger guild of psychology outside of the confines of SPU, and to develop critical thinking skills related to research so that they are able to think like scientists in the practice of psychology—evaluating the local clinical setting so that they can provide the most efficacious care. In summary, the goal for increasing our focus on research is to create stronger local clinical scientists in support of our mission statement to change the world for the better.

At the same time, building a culture of research has strengthened the program and matches the growing awareness of research as a conduit to meet the goals of the University’s mission. The growth of a research culture at SPU in general and in the Department of Graduate Psychology in particular represents a major shift in worldview. For most of its history, SPU has had a valued tradition of being a teaching institution for the undergraduate liberal arts. While continuing this tradition, the university has sought to expand its identity as a comprehensive university. Organization identify reformation is a complex, long-term undertaking (Friedman, 1999). In order to make this move from being a college with graduate programs to a comprehensive university that values graduate education and supports research throughout the institution it has been necessary for trustees, administrators, and faculty to expand the identity of SPU.

As participants in the psychology marketplace, the growth in scholarship at SPU means that faculty and students are in a better position to
“engage the culture” by conveying what they have to share with the academy and world at large. In turn, such sharing will potentially “change the world” in a variety of ways, including impressing upon the professions as a whole that Christian scholarship is a credible endeavor.

References


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