Introduction

The Rehabilitation Sciences Doctoral Program (RHB) was established in 1999 to “fulfill a leadership role in addressing the rehabilitation needs of individuals in the Commonwealth of Kentucky and beyond through research, education, and service.” This mission have provided the opportunity for faculty members and professionals in physical therapy, occupational therapy, speech and language pathology (communication disorders), and athletic training to obtain doctoral degrees. The RHB program is administered at the University of Kentucky and includes three other university partners, Eastern Kentucky, Murray State and Western Kentucky.

This review was initiated by the administrators and graduate faculty of the RHB program for purposes of evaluating the current program and identifying strengths and weaknesses related to the University of Kentucky’s goal of becoming ranked as a Top 20 Research University. The review was also motivated by an interest in examining progress in the program six goals identified in the program’s 2009-2014 Strategic Plan:

1) Prepare Students for leading roles in an innovation-driven economy and global society
2) Promote research and creative work to increase the intellectual, social, and economic capital of Kentucky and the world beyond its borders
3) Develop the human and physical resources of the University to achieve the institution’s top 20 goals
4) Promote diversity and inclusion
5) Improve the quality of life of Kentuckians through engagement, outreach and service.

Review Methodology

Three reviewers were invited to conduct an onsite review of the RHB program: Jane Case-Smith, Ed.D., The Ohio State University, Kathy Coufal, PhD, Wichita State University and Carl Kukulka, PhD, University of Minnesota. The reviewers interviewed faculty, administrators and students, toured the College facilities, and reviewed documents that summarized student focus groups and student publications. The following people were interviewed:

Carl Mattacola, PHD., RHB Program Director
Gilson Capilouto, PhD, RHB Administrative Apprentice
Patrick Kitzman, PhD, RHB Director of Graduate Studies
Dana Howell, PhD, Eastern Kentucky University RHB Doctoral Liaison
Colleen Schneck, ScD, Eastern Kentucky University Occupational Therapy Department Chair
David Gale, PhD, Eastern Kentucky University college of Health Sciences Dean
Lori Gonzalez, PhD, University of Kentucky College of Health Sciences (CHS) Dean
Charlotte Peterson, PhD CHS, Associate Dean for Research
Sharon Stewart, EdD, CHS Associate Dean for Academic Affairs
Program Evaluation: Findings

The RHB program currently has 41 students, 25 part-time and 16 full-time. Students are accepted by advisors if they match the advisor’s research program. All of the current students have primary advisors and committee members from the University of Kentucky (UK) and Eastern Kentucky University (EKU).

The program has 38 doctoral faculty, of which 29 from EKU and UK are actively involved. The EKU and UK graduate faculty include 8 Communication Sciences and Disorders, 8 Occupational Therapy, 7 Physical Therapy, and 5 Athletic Training. The Associate Dean for Research, Charlotte Peterson is a major asset to the program for supporting grant writing, finding research support and funding, and mentoring faculty and students in research. Dr. Carl Mattacola provides strong leadership to the program, is an excellent communicator, demonstrates transparency, appears to be proactive, and appears to have a vision for the PhD program.

Program Courses and Content

Many graduate faculty participate in teaching the PhD courses. Both EKU and UK faculty teach the core courses and the discipline specific courses. A number of courses are co-taught. Students’ feedback about the courses was positive. A few students felt that they should have received more credits for the courses than they did. The core courses have recently changed to increase the emphasis on research and evidence based practice. These changes seem to be positive. The degree requires 56 credit hours, which seems to align with University requirements for a doctoral program. The structure of the program included core course, discipline specific courses, cognate courses, a seminar series and research and teaching apprenticeships. The number of courses seemed to be somewhat high and may be examined over time as the research emphasis of the program increases.

In general, the students seemed pleased with the courses. The focus groups and interviews during the onsite visit voiced praise of the courses. The students enjoyed hearing from multiple faculty and gaining interdisciplinary perspectives. Certain students felt that certain courses were too much work. Some of the students expressed that they would like more mentoring and feedback from the faculty.

The students report that advisors are very flexible about the courses taken. Students have been encouraged to take courses out of the college for their cognate credits and sometimes for discipline-specific credits. The students appreciated this flexibility although at times, certain students stated that they needed a better road map to understand what courses they could take and when they were available. It is difficult to maintain accurate information about all of the
courses available in the University, particularly high level seminars that often taught on alternating years.

Many of the didactic courses are taught with a long distance audience. These are taught in classrooms that use interactive TV, so the distant students are participating in real time. Courses are supplemented with online materials but courses are not taught solely online. Faculty and students voiced satisfaction with the technology.

Courses appear to be offered on a regular schedule on a variety of rehabilitation and research methodology topics. Many of the courses are taught by several faculty, which is appreciated by the students. Seminars are offered in teaching and/or research each semester.

Each student takes three research apprenticeships. These are mentored by different faculty, may involve different research activities from data collection to analysis, and may or may not relate to the student’s dissertation. The students also take one teaching apprenticeship in which they gain experiences teaching with the faculty.

Students

When the PhD program was first established, the students who entered the program tended to be older, mid career rehabilitation faculty or professionals. Most of the original students were interested in obtaining a terminal degree for purposes of teaching at the university level. Many of these older students came to the RHB program with established research interests and they pursued this interest in their dissertation work with faculty whose primary research may not align well with the student’s interest.

The program currently has 41 active students. This represents a very high enrollment for a Rehabilitation Sciences PhD program. Of these students, 25 are part-time and 16 are full-time. The faculty discussed this ratio for full-time to part-time and questioned whether or not this was the correct ratio. Most (about 90%) of the part-time students are working full-time and a large percentage are long distance students. A number of faculty voiced that their own research productivity may improve with more full-time students who were actively involved in their research programs. The faculty stated that in recent years, they were enrolling more full-time than part-time students and they foresee a change in the ratio of part-time to full-time students. A number of faculty expressed interest in developing a student body with equal numbers or eventually more full-time than part-time students. The increase in full-time students implies that additional funding for students will be needed.

In our meeting with the PhD students (about 16), only 20-30 percent indicated that they planned to enter faculty positions in Research I Universities, 70-80% indicated that they planned to enter faculty positions in teaching universities or clinical research positions. These percentages suggest that students’ expectations are somewhat misaligned with faculty perceptions of the PhD program. Faculty expressed that the purpose of the program was to prepare students to enter research extensive universities.
The faculty were concerned that the part-time and distance students were not receiving a rich PhD experience. They were concerned about the engagement of distance students. In interviewing students at Eastern Kentucky, the students stated that they felt highly engaged. They did not believe that the distance was a barrier. They felt that the PhD program was an important part of their lives and could not imagine dedicating any more energy and time to their studies. Therefore the distance students felt that they received adequate mentoring and support and had experienced a rich learning experience; the EKU students were highly satisfied with their PhD program experience.

**Faculty Research**

The doctoral faculty have research programs that are active and productive. The faculty reported that 8 to 10 research labs are active and have students participating in the lab’s work. It appears that the research programs of the faculty are quite varied, allowing students choices for their dissertation work. The research funding of the faculty is increasing but remains relatively low. As a result, few PhD students are on research funding. The faculty realize that their students need additional research funding and they are working toward increasing research funded Graduate Assistant positions. Most of the faculty are involved in interdisciplinary research; these programs are a good match to the program’s goals and to what the students are learning in their course. The interdisciplinary research should continue to grow as a core element to the RHB PhD program. With this interdisciplinary model is also broad exposure to different research methodologies. The students appreciated learning both quantitative and qualitative analyses and felt that learning different analytic techniques was an advantage.

In addition to the four core disciplines represented in the program, many faculty from other departments participate. These faculty serve on students’ dissertation committees and supervise students in research apprenticeships. This model increases the resources available to the students and enriches the RHB faculty’s research.

The faculty and administrators expressed some concern about the co-chair model that they have adopted for candidacy examination and dissertation committees. This model was originally adopted because the university faculty at EKU, Western and Murray were not recognized as graduate faculty at UK. This problem has since been resolved and a number of EKU faculty are now graduate faculty in the RHS program. Although co-advisors does ensure the interdisciplinary strength of the committee, co-advisors can require excessive time and communication effort. It seems appropriate that co-advisors become an option rather than a requirement for dissertation committees.

The faculty believe that they can better use the PhD students to grow their research. The reviewers agreed that the PhD students should be viewed as manpower for the faculty’s research programs. To increase the contribution of students to faculty research, more full-time, grant funded students are needed. Barriers to this model are that even when research grant funding is available, the students can make more money in practice. Possible solutions to this
disparity between clinical wages and graduate assistantships are asking the University to match grant funding, writing in higher student salaries, and encouraging students to go into PhD GRA positions immediately after their professional degree, before they are dependent on a large salary.

**Leadership**

One clear strength of the program is its leadership. Key administrators, including Dr. Carl Mattacola, Sharon Stewart, Charlotte Peterson, Janice Kuperstein and Lori Gonzalez, appear to have good relationships with all of the faculty, including EKU faculty. A number of UK and EKU faculty have also taken on leadership roles in the program. The administration and faculty have clearly promoted interdisciplinary cooperation and has empowered the students to achieve. The administration has developed a strategic plan, regularly reviews it, and has made timely revisions to the current program. The leadership has promoted extensive faculty involvement in the program and promoted important philosophies about scholarship, interdisciplinary collaboration, and relationships between faculty and students.

**Out comes**

The Rehabilitation Sciences PhD program is relatively new and began about 10 years ago. Since 1999, the program has graduated 18 students. This is an extraordinary number of PhD completions in a short time. The program averages 4-5 graduates/year (the first graduated in 2005). This is a steady rate of completion that should continue with 41 current students. It is anticipated that many of the part time students will graduate in the next few year. The students’ productivity has been excellent to outstanding. Based on a report given to the external reviewers, since 2006, the students with the RHB faculty have consistently published and presented at high levels. Since 2006, students with faculty have had 62 publications and 129 presentations, many in national and international venues. Almost all of these publications and presentations were peer reviewed. The report appeared to be missing certain students’ data and therefore these numbers are probably higher. The faculty is to be congratulated on the publication record of their students.

**Facilities**

The college is housed in a relatively new building with plentiful lab, office and classroom space. The PhD students have offices in various divisions, often in or near their labs. The technology in the building seems very good with excellent computer capacity and classrooms with interactive television. Although the ITV technology was state of the art 10 years ago, newer technology using Skype may allow for more interaction among participants. It may offer a more seamless environment, where students long distance feel like they are part of the classroom. Overall, the facilities are excellent at both EKU and UK, where dedicated research space is available and students have excellent workspace.
Funding

A variety of funding mechanisms are available. Central university funding for graduate associate positions is minimal and will probably not increase in coming years. The faculty expressed that funding was an area in which they hoped to improve. Very few students are on research funding. In recent years, a number of clinical funded positions have been created. These are PhD student positions paid by the clinical partners of the College. They work at facilities such as Cardinal Hill and Central Baptist Hospital 20 hours a week, and the facilities pay full time tuition and stipend for their work plus study. The advantages of these positions are that they can lead to clinical research and an easy to access population for study. It would appear that research within the clinical sites may not always become feasible or desirable; however, these positions have increased the number of full time students. The program is interested in obtaining training awards through NIH or US Department of Education; however, these awards do not appear within reach at present. Federally funded training grants for the PhD program may be feasible as more faculty have funded research.

One funding issue that was voiced by both EKU and UK faculty was that the EKU Occupational Therapy Department is not compensated for its extensive involvement in the program. Although money is transferred from UK to EKU for faculty time per an agreement when the original program was established, the money is not transferred from EKU Central administration to the Department. Therefore all of EKU’s contributions to the program are not directly compensated. Despite lack of compensation, the EKU faculty voiced strong commitment to the PhD program. They identified benefits beyond monetary including that a number of their faculty are in the program or have completed their degrees and the faculty’s research has grown through PhD student work and interdisciplinary collaborations with the UK faculty.

Assessment of the RHB Program Going Forward

National Treads and Program Fit

The reviewers were asked to assess the RHB program in light of national trends.

The program’s strengths include the RHB’s interdisciplinary faculty, courses and research. High quality students across the disciplines are an additional strength. Interdisciplinary research has funding priority and is viewed as critical to solving today’s healthcare problems. The collaborative models for training and research that characterize the RHB are a great strength. The program has taken a leadership role by building a PhD program founded on interdisciplinary collaboration. Students trained under this model should have clear advantage in their research programs going forward.

The clinical ties that the program has should support excellent clinical and translational research. The program faculty should continue to mentor their clinical partners to develop
research rehabilitation models and interventions. The future of health professions rests on research programs that are directly tied to the clinical services and interventions.

Curriculum & Instruction

The reviewers were asked to evaluate how the RHB is positioning UK to be ranked in the top 20 Best Public Universities.

The reviewers rated the quality of the RHB as outstanding. Increasing the rank of the program, the College and the University is no small feat, given that all of the public research universities currently hold this goal. Ranking is based on funding to a large extent and to rise into the top 20, UK would need to have greater success in obtaining NIH funding. The current track record is fair and increasing levels of NIH funding seems feasible given the quality of the faculty.

The reviewers felt that currently the RHB program has somewhat divided and conflicting missions. In the past, the program has served the state of Kentucky by providing an opportunity for many faculty to obtain a PhD degree and to strengthen their research. The program has been highly flexible and has willingly taken many part-time students. As a result, the faculty’s own research programs could not grow quickly because their PhD students were not full-time in their labs or research programs and were working on research programs that did not align well with the faculty’s.

To increase the stature of the RHB, more emphasis is needed on the UK/EKU faculty’s research programs so that students work directly on these programs, primarily in fulltime study. To make this possible, more research funding is needed. The UK faculty seem to be working toward this increase in grant funding.

It is anticipated that with more energy spent on research with full-time students, the need for distance courses and the number of part-time students will decrease. This transition must be supported by the University and the state’s administration. The reviewers felt that the faculty could not continue to juggle both missions (that of a research extensive university and a land grant university) successfully and should choose which mission will guide future program development.

Research and Scholarly Activities

The reviewers were asked to comment on how well the faculty was meeting the student-faculty potential.

The college facilities are excellent. The outcome data for student publication and presentation are excellent and represent outstanding outcomes for a large number of students.

We did not have the opportunity to review all of the faculty members’ dossier but had the distinct impression that the faculty were highly productive and successful. A number of faculty
expressed interest in obtaining more research funding; this is the goal of more health professions colleges. It is an important goal for the future of the program.

The support for research appears to be excellent and includes an Associate Dean of Research, grants officers, and research administrators. The faculty have successful research programs, many of them long standing. The focus on interdisciplinary research aligns well with national priorities and the emphasis of NIH. Their track record of interdisciplinary research well supports their efforts to win an NIH Clinical and Translational Science Award. The reviewers had no reason to believe that the faculty would not be successful in the goal of increased research funding.

**Summary and Recommendations**

In summary, the RHB program has many strengths. The leadership is outstanding. Collaboration among the disciplines is excellent and is well supported by the administration. The faculty are talented, committed, focused, and collaborative. They appear to be universally excellent teachers, mentors, and researchers.

In recent years, the program has made some transitions that appear to be important to sustaining the growth and reputation of the program. Entering students must now align with a particular faculty member’s research and full-time students are preferred. Faculty are making greater efforts to obtain research funding with some success. Interdisciplinary clinical and translations research programs are emphasized. Continued efficiencies in teaching will allow an increased focus on faculty research.

Students’ research apprenticeships should be focused on the faculty’s research. Students’ dissertations should align well with faculty research and funded research. The research apprenticeships can be opportunities to collect pilot data for the student’s dissertation proposals.

Faculty can use Graduate Teaching Associate positions to support their teaching. GTA positions allow students to have more time with the faculty and give them opportunities to hone their teaching skills. These funded positions are beneficial because students learn the academic culture and the programs benefit from additional teaching support.

Additional research funding should be actively sought. When applying for research grants, faculty should try at every opportunity to ask for GRA funding. Sources that allow GRA funding should be prioritized. The faculty appear to recognize this need and to be actively writing grants with fair success in grant awards.

The faculty expressed interest in developing DPT/PhD, CDS/PhD, and MOT/PhD programs. These programs may attract full-time students. This model appears to have benefits and few limitations. It will likely produce strong career scientists.

The reviewers agree that transitioning from a majority of part-time students to a majority of full-time students will have a number of benefits. This switch will produce more students engaged
in the faculty’s research and enculturated in academia. With more full-time students, the faculty are likely to reap greater benefit from their work with students. Full-time doctoral study may be needed to develop scientists who are successful in research extensive universities.

With the transition to a higher percentage of full-time students, it will be important that the PhD students are integrated well into the faculty’s research. This transition has begun and will likely continue as students are currently not admitted unless they agree to study with a particular faculty member and have the support of that faculty member.

It is likely that with full-time students who spend greater amounts of time in the College and are involved in the faculty member’s research program, mentoring will be easier and more comprehensive. This can potentially reduce the faculty’s expressed overload of advising and mentoring. It should also increase the student’s perception of level of mentoring.

It is recommended that the funding model that UK and EKU originally agreed upon, with tuition for courses taught by EKU OT faculty going back to the EKU Department of Occupational Therapy be instituted. This transfer of funds to EKU could be used to fund full-time doctoral students, providing an added benefit to the RHB program and the Occupational Therapy program.