

**NC STATE UNIVERSITY**

College of Education

# IMAGINING THE FUTURE OF DOCTORAL EDUCATION: THE SCHOLAR LEADER

*NC State University's College of Education*

*Stimulus Paper*

*Revised October 1, 2015*

## ***Writing Group***

Mary Ann Danowitz (Co-Lead Writer)

Hiller A. Spires (Co-Lead Writer)

Aaron Clark

Susan Faircloth

Jayne Fleener

Hollylynne Lee

Ellen McIntyre

*Table of Contents*

I. Introduction..... 3

II. The College of Education In Context ..... 4

    Transforming Doctoral Education ..... 4

III. The Scholar Leader Vision..... 5

    Key Features ..... 5

    Proficiencies..... 6

    Figure 1..... 7

    High Impact Practices ..... 7

IV. Dynamic Configurations and Relationships to Support Doctoral  
Education Progress in Re-characterized Inter-Related PhD Programs..... 8

    Figure 2..... 9

V. Moving Forward..... 9

VI. Standard Operating ProcedurEs for the Scholar Leader PhD Programs..... 10

Appendix A: Curricula Overview..... 11

Appendix B: Developing Interdisciplinary Knowledge ..... 12

Appendix C: Departments/PAS 2015..... 13

Appendix D: Standard Operating Procedures for PhD & PAS..... 14

Appendix E: PhD Application Requirements..... 16

Appendix F: Acknowledgements..... 17

References ..... 19

“EDUCATION IS THE MOST POWERFUL WEAPON YOU CAN USE TO CHANGE THE WORLD.”

NELSON MANDELA

## I. Introduction

Doctoral degree graduates are in positions to solve critical problems, expand the boundaries of knowledge, teach future generations, and provide leadership in all areas of society. Major assessments, policy directives, and supranational, national, and local initiatives around the globe are currently underway to find ways to better prepare these leaders to perform successfully in our economically competitive and knowledge-based world (see Boud & Lee, 2009; Nerad & Huggelund, 2008; Powell & Green, 2007; Ehrenberg & Kuh, 2009; Golde & Walker, 2006; Walker, Golde, Jones, Bueschel, & Hutchings, 2008). Current reform initiatives and related research efforts offer useful conceptual and analytical insights regarding the doctoral experience and ways to increase its relevance to society and time to degree. Yet most of the reforms are based on problems that exist today and we believe a future orientation for doctoral reform, especially in the area of education, is greatly needed.

To take a future orientation for this shortcoming, another perspective is needed. We propose a fundamental rethinking of the competencies for educators, counselors, teacher educators, leaders, researchers, and policy makers. We propose to prepare graduates who will be future oriented, able to rethink the goals of education, and aware of and capable of leading and managing change in a diverse society and digitally and globally connected world. The question before us is: How can doctoral education be redesigned in order to respond to the rapidly changing nature of our society as well as to positively influence society in the years to come? How can we create *scholar leaders*?

All facets of the educational system, including higher education, are called upon to make changes in order to create a positive trajectory for inclusive student success. Many predict that within the next decade, the practices of teaching and learning will undergo fundamental alterations as institutions of higher education reinvent themselves in relationship to global, social, political, and technological change (Pew Internet & American Life Project, 2012). It is with this forward-oriented perspective that the College of Education (CED) at North Carolina State University is transforming programs to be world-class doctoral education programs that graduates will help shape the future direction of education.

The purpose of this *stimulus paper* is to creatively synthesize ideas that have been generated from the CED PhD re-visioning process that began in May 2012. Data sources for the paper include: (a) ideas from CED faculty generative work sessions, (b) recommendations from representative external stakeholders, (c) summaries of discussions from the CED program review group, (d) an initial proposal of the CED PhD design group, (e) ideas from the Career & Technical Education and Workforce and Human Resource Education groups, (f) a review of leading programs across the nation, and (g) the current literature on doctoral education.

Work after January 2013 of task forces, an external consultant, a foundations working group, and the directors of graduate studies has take the form of standard operating procedures that will guide the form, content, and processes of the re-characterized PhDs. The intent of this Stimulus Paper is to advance the work of the CED faculty in our efforts to create a world-class doctoral education experience.

## **II. The College of Education In Context**

NC State's Chancellor Randy Woodson, Provost Warwick Arden, and the Graduate School have charged the NC State Campus to re-vision graduate programs to be more effective and efficient. Former Dean Jayne Fleener, through the College's strategic plan, charged the faculty to re-design programs to become more prescient, agile, interdisciplinary, cross-departmental, and to serve as *signatures* to our College. This latest charge came on the heels of vast and striking changes within the College that began with the development and opening of the College's Friday Institute for Educational Innovation on NC State's Centennial Campus. Since that time, The Friday Institute and the College of Education have greatly increased their external grant support (from \$1.1M in FY 1999-2000 to \$10.6M in new grants in FY 2014-15) and have attracted more nationally- and internationally-recognized education scholars and leaders to our College. This and other recent developments have positioned the College to move to the next level of organizational development and impact.

Drawing on NC State's land grant focus, the College's vision is that it will lead the way in North Carolina in increasing opportunities for education success and reducing achievement gaps. This aligns with the mission: "The College of Education is a voice of innovation for learning across the life span. We prepare professionals who educate and lead. Our inquiry and practice reflect integrity, a commitment to social justice, and the value of diversity in a global community."

Until August 2015, the College had five PhD programs: Educational Research, Policy, and Higher Education (with 4 program concentrations), Curriculum & Instruction (with 7 program concentrations), Counselor Education (with 4 program concentrations), Science Education, and Mathematics Education. In response to the University's focus on program effectiveness and efficiencies, the College's goal was to reduce the number of PhD degrees while simultaneously transforming the quality of doctoral programs, graduates, and their potential for positive impact on the field of education and society at large. The College has graduated 243 PhDs since 2000. Our PhD graduates are employed in various settings, including universities and community colleges, K-12 school districts, state and national level organizations, and consultancies or private practice. With renewed focus on quality and outcomes, we anticipate our graduates having even greater influence in the many sectors in which they serve at the local, state, national, and global levels.

### **Transforming Doctoral Education**

There has been steady debate and critique in recent years about the nature and related pedagogies of doctoral education (Golde, 2007; Olson & Clark, 2009; Shulman, Golde,

Bueschel, & Garabedian, 2006). Shulman (2010) aptly captured a striking paradox in academia when he noted: “Our practices in doctoral education are a combination of longstanding traditions, replications of how we ourselves were trained, administrative convenience, and profound inertia. We do not subject our programs to the kinds of experimental, skeptical, adventurous innovations and tests that we claim to value in our scholarly work” (p. 3). Likewise, in *The Formation of Scholars* (2008), Walker et al. highlight the plight of doctoral education in a time of escalating expectations and accountabilities and shrinking resources, asserting “doctoral programs today face fundamental questions of purpose, vision, and quality” (p. 3). These compelling critiques reaffirmed our goal to transform CED doctoral education with a clear and unambiguous purpose.

We juxtaposed underlying critiques and recommendations in the published discourses on doctoral education with salient micro cultural/organizational factors that most directly influence the skills and knowledge of doctoral graduates: curriculum, instruction/pedagogy, peers/others, and advisors/mentors. We combined this thinking with CED faculty assessments of successful pedagogies and practices that are likely to promote the timely development of *scholar leaders*. Possessing a future orientation, our *scholar leaders* would produce high-impact research and scholarship, influence policy, and lead change to solve pressing real-world problems.

### **III. The Scholar Leader Vision**

The *scholar leader* will be a broadly-educated individual with deep content knowledge in at least one specialty area and skills in research, policy, equity and diversity, technology and innovation, global understanding and impact, and multimodal communication (see Figure 1). *The scholar leader* will be prepared to lead and influence policy decisions at the local, state, national, and international levels to solve the grand challenges of education. The *scholar leader* will be developed around NC State’s strengths in technological design, innovation, community engagement, research scholarship, and social entrepreneurship. Throughout the doctoral experience, our aim is to develop a culture of inquiry, evidence, and action in our graduates. The *scholar leader* design closely aligns with the College of Education and the University’s strategic plans, which have goals, strategies, objectives and tactics that will provide a solid infrastructure for and drive the success of this new initiative.

#### **Key Features**

The following key features will shape the *scholar leader* doctoral experience:

- A research community that focuses on the strategies and interventions that will address the grand challenges of education and affect policies.
- A culture of innovation that promotes the next generation of scholars engaged in leading and negotiating change.
- A climate of inclusivity that encourages effective responses to the opportunities and challenges of social and cultural diversity.
- The development and use of cutting edge technology to bring about digital transformation while reducing the digital divide.

- Significant interdisciplinary and collaborative inquiry between the College of Education and other disciplines beyond education.
- Deep engagement and powerful partnerships with cross-sector stakeholders.

## **Proficiencies**

As graduates of our program, scholar leaders may expect to engage with the grand challenges of education with the following proficiencies:

- Deep content knowledge and research expertise.
- Understanding of policy and its implications for education.
- Broad perspectives and effective responses to diversity as they relate to educational and societal inequalities.
- Ability to engage in and use cutting edge technology as a tool for innovation and change in an increasingly globalized world.
- Multimodal communication practices that enable graduates to engage in and translate research to different partners and stakeholders.
- Knowledge and capacity to engage global educational change initiatives

Figure 1 highlights the micro cultural/organizational features that influence the skills, knowledge, and dispositions of the *scholar leader* within the research community and the broader realities of the macro context.



Figure 1. Micro cultural/organizational features that influence the Scholar Leader.

### High Impact Practices

To achieve these proficiencies in the *scholar leader*, faculty will reach consensus within and across programs to develop, implement, evaluate, and revise high-impact practices. Examples may include:

- **Recruit and Retain Talented Students.** We will engage in purposeful recruitment of high-potential doctoral students from diverse backgrounds with a demonstrated commitment to educational change.
- **Collaborate on Research Topics with Policymakers, Practitioners, and Other Stakeholders.** Students will collaborate and be engaged with policymakers and practitioners to ensure the relevance and timeliness of research topics/dissertations.
- **Interdisciplinary Seminars.** Students will complete a series of two interdisciplinary seminars. These courses will be co-taught by faculty members from different PhD programs.
- **Global and National Immersive Experiences.** Students will work alongside and learn from recognized experts (both faculty and others) who address pressing educational and social problems.

These practices will complement and be supplemented with courses, colloquia and experiential learning to enhance the individual and collective education of the *scholar leader*.

#### **IV. Dynamic Configurations and Relationships to Support Doctoral Education Progress in Re-characterized Inter-Related PhD Programs**

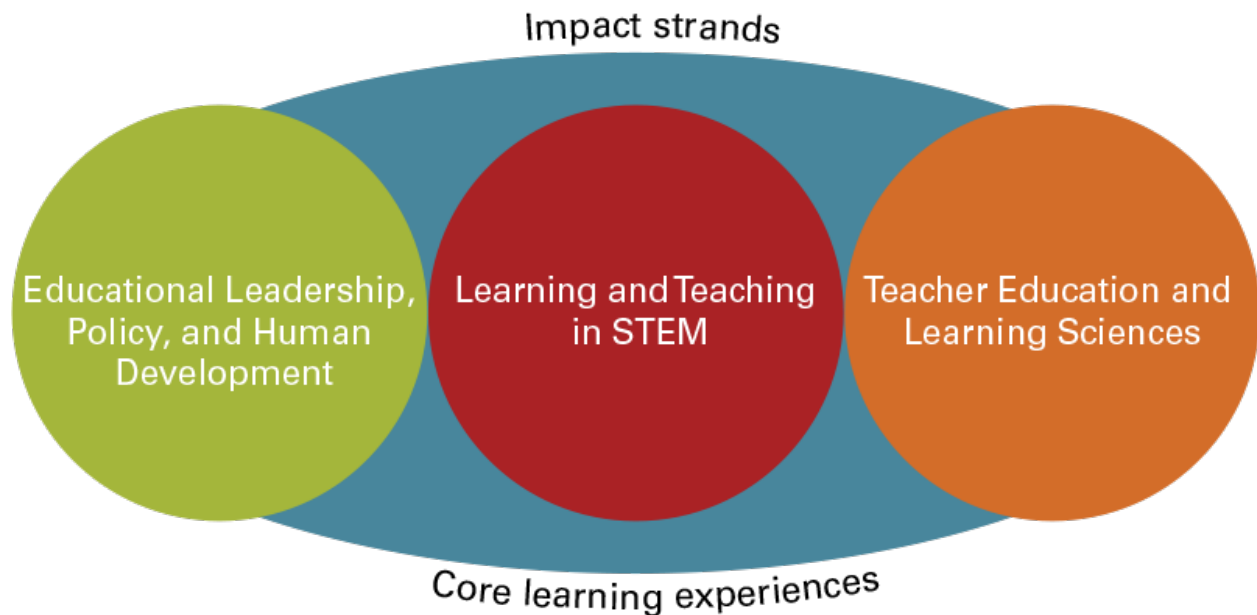
We proposed and are implementing three inter-related PhD programs based on the vision and related features of the *scholar leader* concept. The new programs, emerging from the current programs in the College, are Teacher Education and Learning Sciences; Educational Leadership, Policy, and Human Development, and Learning and Teaching in STEM.

These PhD programs correspond with the reconfigured departmental structure of the College that occurred during the 2014-2015 academic year. Locating each PhD in a corresponding academic department will facilitate program coordination and eliminate the need for extra-departmental management and coordination of the PhD programs (See Appendix C).

Each PhD program has developed educational experiences to prepare graduates with the core learning proficiencies outlined in Section III. The PhD programs have a total of 13 program areas of study to further provide deep disciplinary content knowledge with appropriate academic foci. The program areas of study are the key organizational units of a PhD student's academic experiences. The governance structures, functions, and processes of the re-characterized PhD programs and the program areas of study were voted upon by the CED graduate faculty during the 2014-15 academic year (See Appendix D). Impact strands, or interdisciplinary research clusters, will be established from multiple PhD programs. These impact strands, or core learning experiences, are being created from the faculty's intentional prioritization of work to address particular grand challenges, drawing from other University units as well as partners outside the University. Structures will be flexible to respond to the changing needs of education and society, and will not necessarily



correspond with departmental structures. Figure 2 shows the new departmental configuration and PhD re-characterization with the two principal trans-departmental connectors: foundational and methods-earned credit experiences and impact strands. A brief description of the two foundational credit-earning experiences and the methods sequence are found in Appendix A .



*Figure 2.* Three inter-related PhD programs linked by foundational and methods courses and impact strands.

## V. Moving Forward

- a. We will view the revised *stimulus paper* as a document for College of Education graduate faculty and staff to use as a touchstone and to both build upon and modify in order to reach agreement about the principles, content, and processes as the faculty engages in continuous improvement of doctoral education.
- b. We will recommend an assessment and clarification of differences between the PhD and the EdD so that the College can meet the needs of the profession and of individuals pursuing a terminal degree in Education. Decreasing the number of PhD students will permit the College to increase the number of EdD and 6<sup>th</sup>-year specialist degree students.
- c. We anticipate that further interdisciplinary cooperation across the University and greater College of Education participation in the Chancellor’s Faculty Excellence Program (cluster hires) will contribute to the organic and nimble nature of the content, alliances, and form of the *scholar leader* experience.
- d. Graduate faculty members will have a primary association with a program area of

- study and may have a secondary program association. The primary affiliation typically will be determined at the time of initial appointment to the College.
- e. We anticipate further exploration and changes so that our faculty and student workspaces will have the physical and virtual attributes of next-generation teaching, learning, and leadership.
  - f. We think it is realistic that some adjustments of other services and degree, certificate, and licensure programs (undergraduate and graduate) will be necessary in order to align them with our new doctoral organizational developments.
  - g. We understand that institutional infrastructure and support will be required for faculty members to develop new skills and knowledge to deliver a future-oriented curriculum and work with students to develop their proficiencies as scholar leaders.
  - h. We are aware that distinguished faculty scholarship and significant programs of research are crucial to attract and graduate talented students and are the cornerstones of high-impact experiences for the *scholar leader*.
  - i. We advocate a rigorous, mixed methods research project to understand student and faculty experiences and to implement a continuous improvement process for this new model of PhD education.

## **VI. Standard Operating Procedures for the Scholar Leader PhD Programs**

The members of the Graduate Faculty of the College of Education in April 2015 and September 2015 approved governance standard operating procedures and admissions guidelines. Copies of those documents are in the appendices.

## Appendices

### Appendix A: Curricula Overview and corresponding college standard operating procedures



#### **Scholar Leader: Diversity and Equity in Schools and Communities**

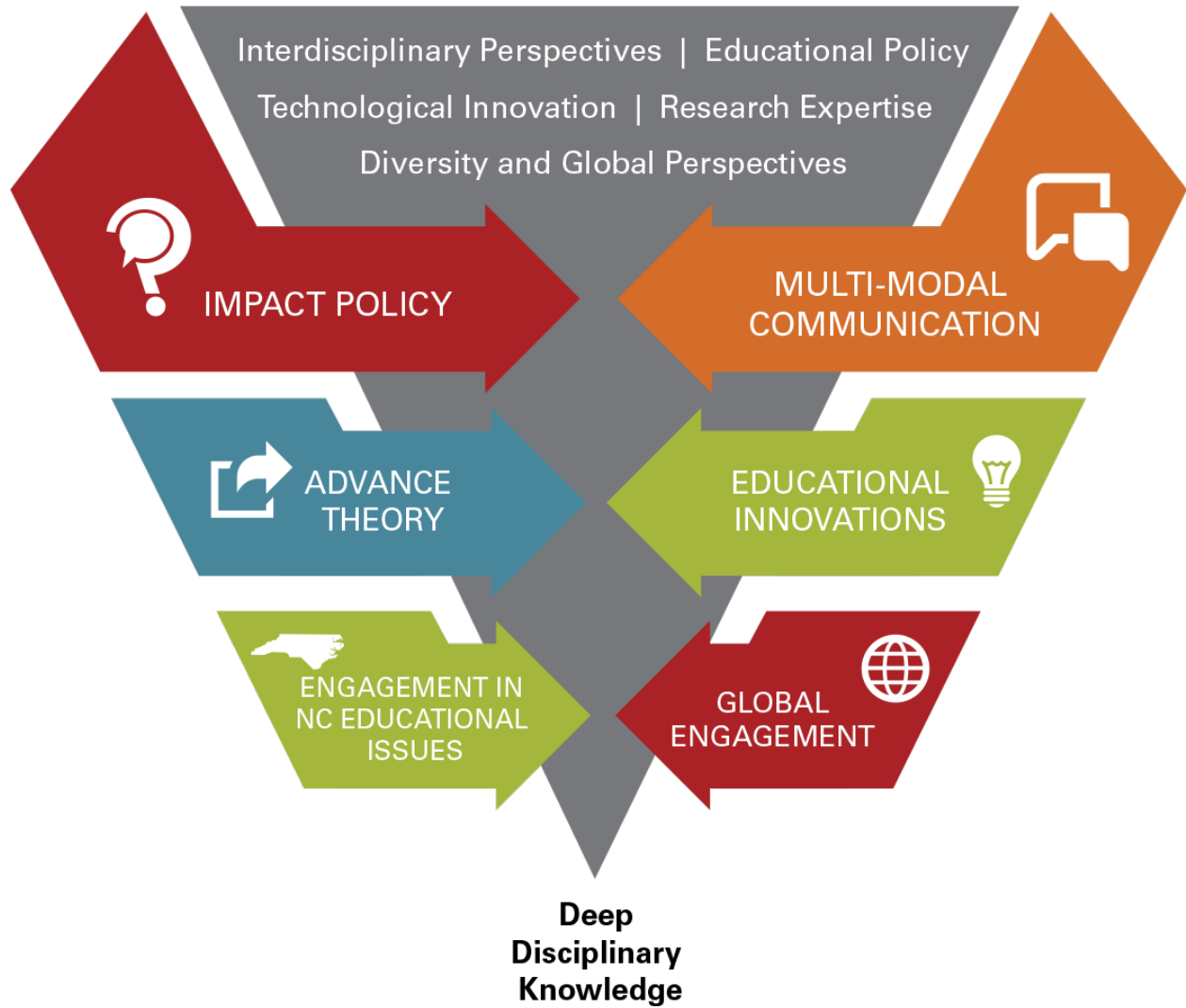
**Course aim:** This problem-based course will address contemporary theories and research to help students understand critical issues related to diversity and equity in education and society.

#### **Scholar Leader: Systemic Change in Education and Society**

**Course Aim:** This problem-based course will address contemporary theories and research to help students understand critical issues of systematic change in relationship to policy, leadership, and learning

**Appendix B: Developing Interdisciplinary knowledge graphic**

# THE SCHOLAR LEADER: *WE THINK AND DO*



## Appendix C: Departments, Degrees, and PAS 2015

<b>Educational Leadership, Policy, and Human Development (ELPHD)</b>	<b>Teacher Education and Learning Sciences (TELS)</b>	<b>Science, Technology, Engineering, and Mathematics Education (STEM Ed)</b>
<b>Educational Leadership, Policy, and Human Development</b>	<b>Teacher Education and Learning Sciences</b>	<b>Learning and Teaching in STEM</b>
Adult, Workforce, & Continuing Professional Education	Educational Psychology	Mathematics & Statistics Education
Counselor Education	Elementary Learning Sciences	Science Education
Educational Evaluation & Policy Analysis*	Learning, Design & Technology	Engineering & Technology Education*
Higher Education	Social Justice*	
	Social Studies Education	
	Studies in Literacy & English Language Arts	
*program areas of study will not admit students for the 2016-2017 academic year		

## **Appendix D: Standard Operating Procedures for PhD & PAS**

### **PhD Coordinating Committee**

Each PhD has a Coordinating Committee to administer the degree program in a collaborative manner. Each Coordinating Committee includes the Director of Graduate Programs, the faculty coordinator of each of the program areas of study (PAS) under the PhD program, the department head, one staff member responsible for the support of graduate education (e.g., admissions and scheduling), and one graduate student elected by the students in the PhD program. The Committee is responsible for planning and coordination regarding:

- Advancing PhD and PAS quality associated with enrollment projections, cohort size, diversity, recruitment, admissions and coordination among the PAS;
- Ensuring the development and delivery of the common foundational core for the PhD programs across the College;
- Ensuring that PAS requirements align with the PhD such as credit-hour requirements and transfer of credits and the nature and timing of comprehensive exams;
- Creating and keeping the PhD Handbook up-to-date and accurate to provide a year-by-year and credit-hour summary of expectations and serve as a guide for students from matriculation through graduation;
- With the facilitation of the DGP ensuring the PhD meets the accountability requirements of the Graduate School in improving student learning through effective outcomes assessment;
- Overseeing recruitment and orientation activities;
- Overseeing regular review of student progress and ensuring that every student receives feedback about his or her academic progress at least once a year;
- Ensuring that the PhD curriculum is well planned and scheduled for several years ahead and that curricular offerings are kept up to date;
- Fostering a sense of community through faculty and student events so that faculty and students have opportunities to get to know each other in ways that will lead to productive interaction;

- Organizing events to prepare students to successfully write and deliver scholarly and policy papers nationally and internationally and develop grant proposals;
- Organizing celebratory events for significant student and faculty accomplishments;
- Overseeing the PAS process to address student lack of progress towards the degree;
- Awarding the PhD program outstanding dissertation of the year;
- Preparing an annual scorecard for the PhD using standard university indicators for graduate programs (e.g., applications per graduate faculty member, selectivity and yield, degrees awarded per graduate faculty member, and peer-reviewed articles per graduate faculty member; data from the annual review of students);
- Keeping the PhD website up-to-date, accurate, and effective as a primary source of information for future and current students and alumni and alumnae, and in alignment with the other PhD programs in the College;

### **Program Areas of Study**

The Program Area of Study is the primary structural element in the College of Education PhDs. PAS are composed of six (6) or more faculty members who come together around shared intellectual interests as demonstrated by research, scholarship, and grants. At least four (4) of the faculty members must be tenure-track faculty and have primary affiliation with the PAS. Individuals with administrative appointments must have a minimum of a .5 percent commitment to department level faculty responsibilities to be a primary member of the PAS.

All faculty members with full graduate status are expected have a primary affiliation with a PAS. A faculty member may be associated with one or two PAS with one being the primary affiliation and other the secondary affiliation. Faculty members may also, but are not required to, have a secondary affiliation with a PAS. Faculty members with a secondary affiliation are expected to assist the PAS with the recruitment of students and serve on dissertation committees. They are also encouraged to collaborate on research with faculty members and students in that PAS. All faculty members affiliated with a PAS are expected to participate in the governance process of the PAS.

### **PAS Responsibilities**

- Developing an organizational structure with supporting resources for coordinating responsibilities among faculty within a PAS.
- Engaging in a continuous process to attract and recruit, admit and enroll the best prospective students. Each PAS is expected to develop its recruiting plan in conjunction with the PhD program;

- Meeting enrollment targets and ensuring timely degree completion;
- Actively recruiting students from groups underrepresented in the PAS;
- Recommending prospective students for admission through the Director of Graduate Studies to the Graduate School;
- Following through with admitted individuals to encourage them to enroll in the PhD program;
- Obtaining funding for prospective students and/or assisting students in obtaining funding;
- Augmenting the College and PhD program orientation with a PAS orientation;
- Clearly identifying PAS requirements, which align with the PhD program, and defining requirements in a manner that courses are shared across the PhD to ensure sufficient course enrollments;
- Providing consistent mentoring, and fostering academic/professional development and familiarity with appropriate ethical standards;
- Overseeing annual reviews assessing student progress, setting goals, and identifying milestones for the next year;
- Administering the doctoral specific examinations and doctoral dissertation defenses consistent with the PhD program expectations;
- Assisting students in the job search process and providing prospective employers with information about graduating students;
- Annually reviewing indicators of academic program excellence;
- Ensuring the PAS meets the accountability requirements of the Graduate School in improving student learning through effective outcomes assessment;
- Annually updating PAS information for the PhD program Handbook and ensuring that the web pages of the PAS are current at all times.

## **Appendix E: Admissions**

- December 1 deadline to receive priority consideration for admission the following fall.
- GRE scores required (verbal, quantitative and writing)



- One unofficial transcript from each previously attended college or university (NC State Graduate School requirement)
- Three (3) letters of recommendation
- Personal statement (including: goals/aspirations, research interest, focus)
- Resume or CV
- TOEFL/IELTS scores required for international applicants

## **Appendix F: Acknowledgements**

Thank you to the following faculty members, students, and alumni whose work on committees provided the basis for this stimulus paper:

### PhD Program Review Group (2012)

Duane Akroyd  
 Ted Branoff  
 Gigi Dillon  
 Kristin Hoffman  
 Karen Hollebrands  
 Ellen McIntyre  
 Sylvia Nassar-McMillan  
 Wayne Sheffield  
 Lynn Tovar  
 Jeremy Tuchmayer  
 Yuling Wang  
 Tamara Young

### PhD Design Group (2012)

Steve Amendum  
 Stan Baker  
 Antonio Bush  
 Aaron Clark  
 Bill DeLuca  
 Audrey Jaeger  
 Karen Hollebrands  
 Hollylynne Lee  
 John Lee  
 Ellen McIntyre  
 Sylvia Nassar-McMillan  
 John Nietfeld  
 Hiller Spires  
 Jeremy Tuchmayer  
 Yuling Wang

Additional Ideas (2012)

Aaron Clark  
James Bartlett  
Tim Hatcher  
Brad Mehlenbacher

Task Forces (2013)

*Governance*

Hiller Spires\*  
Lance Fusarelli \*  
Susan Osborne  
Julia Storberg-Walker (chair of the Faculty)  
Aaron Clark  
Audrey Jaeger  
Jereme Tuchmayer\*\*  
Charlene Mutamba\*\*

*Core and Content*

Hollylynne Lee \*  
Alyssa Rockenbach\*  
Kristin Conradi  
Andrew McEachin  
Sylvia Nassar-McMillan  
Jimmy Scherrer  
Emily Thrasher\*\*  
Shauna Morin\*\*

*Impact Strands*

Steve Porter\*  
Eric Wiebe\*  
Jessica DeCuir-Gunby\*  
Temple Walkowiak  
Bonnie Fusarelli  
Bill DeLuca  
Dave Frye  
Dan Spencer\*\*

*Budgeting and Human Resources*

Ellen Vasu  
Ted Branoff  
Paola Sztajn

\* co-chair

\*\* student

## References

- Boud, D., & Lee, A. (2009). Changing practices of doctoral education. *British Journal of Educational Studies*, 57(3), 339-341.
- Ehrenberg, R. G., & Kuh, C. V. (2009). Introduction [Electronic version]. In R. G. Ehrenberg & C. V. Kuh (Eds.), *Doctoral education and the faculty of the future* (pp. 1-11). Ithaca, NY: Cornell University Press.
- Golde, C., & Walker, G. (2006). (Eds.). *Envisioning the future of doctoral education: Preparing stewards of the discipline*. Carnegie essays on the doctorate. San Francisco, CA: Jossey-Bass.
- Golde, C. (2007). Signature pedagogies in doctoral education: Are they adaptable for the preparation of education researchers? *Educational Researcher*, 36, 344-351.
- Nerad, M., & Hugelund, M. (2008). (Eds.). *Toward a global PhD?* Seattle, WA: University of Washington Press.
- Olson, K., & Clark, C. (2009). A signature pedagogy in doctoral education: The leader-community scholar. *Educational Researcher*, 38(3), 216-221. DOI: 10.3102/0013189X09334207
- Pew Internet & American Life Project. (2012). The future of higher education. Retrieved from <http://www.pewinternet.org/Reports/2012/Future-of-Higher-Education.aspx>
- Powell, S., & Green, H. (2007). (Eds.). *The doctorate worldwide*. London: McGraw-Hill.
- Shulman, L., Golde, C., Bueschel, A., & Garabedian, K. (2006). Reclaiming education's doctorates: A critique and a proposal. *Educational Researcher*, 35(3), 25-32.
- Shulman, L. (2010). Doctoral education shouldn't be a marathon. *The Chronicle Review*. Retrieved from <http://chronicle.com/article/Doctoral-Education-Isnt-a/64883/>
- Walker, G., Golde, C., Jones, L., Bueschel, A., & Hutchings, P. (2008). *The formation of scholars: Rethinking doctoral education for the twenty-first century*. San Francisco, CA: Jossey-Bass.