Training Program Narrative
University of Virginia Interdisciplinary Doctoral Training Program in Education Sciences

DETAILED DESCRIPTION OF THE TRAINING PROGRAM

A. Goals and Thematic Focus of the Program

Goals and aim

This proposal describes the design and implementation of the University of Virginia Interdisciplinary Doctoral Program in Education Sciences. This program builds upon established faculty expertise and doctoral training and recruitment activities at the University of Virginia in the Curry School of Education and the College of Arts & Science Departments of Economics, Sociology, and Psychology. The program will produce 34 doctoral-level Fellows in Education Sciences trained in rigorous methodological approaches to questions of clear educational significance, with a specific focus on educational risk and prevention. The 34 promising scholars will have the requisite tools and have established emerging research programs that will enable them to become research leaders in the education sciences, with specific expertise in student inequality and underperformance related to conditions of social, economic, disability, and ethnic variability in the US. The funding requested in this proposal enables the University of Virginia to continue, extend, and further institutionalize its commitment to integrating diverse disciplines in the mission of education science and related research in teacher training and professional development. This University of Virginia (UVA) effort is grounded upon the premise that methodologically rigorous, cumulative, and educationally-relevant research is a necessary component of solutions to pressing problems and challenges facing education in the US.

The UVA training program is organized around three conceptual principles that together provide a single, integrated aim for training Fellows. The integrative, specific aim for the UVA program is to provide quality research training that is: a) ***Interdisciplinary in perspective,*** *enabling scientific contributions that integrate diverse knowledge bases and transcend discipline-specific perspectives;* b) ***Methodologically rigorous and programmatic,*** *progressing from hypothesis-generating basic research to hypothesis-confirming, randomized controlled trials; and* c) ***Relevant to practice and policy,*** *promoting use of evidence as the basis of practice in schools and on which national and state policy can be developed.* The following sections outline in more detail why these conceptual principles underlie the structure and focus of the UVA Interdisciplinary Doctoral Program in Education Sciences

Interdisciplinary perspectives. Education involves multi-level, multi-domain systems that are complex and dynamic, like the biological systems of which we have increasing awareness and knowledge. The complexity of educationally-relevant questions has been a challenge to progressive, systematic science in part because it demands research informed by multiple disciplines; fundamentally, education is an interdisciplinary endeavor. Educational research, with few exceptions, has nonetheless remained a fairly isolated phenomenon localized in colleges of education (Shavelson & Towne, 2002). This had led to a current state of affairs often characterized as a schism between interesting and rich questions, which are located in educational systems and schooling processes, and the rigorous methods needing to address those questions, which are the province of the social, behavioral, and life sciences (American Psychological Association Education Leadership Conference {APAELC}, 2003). Conceptual and methodological frameworks for education research must be broad and sophisticated enough to integrate information about social, cognitive and biological development of children; training

and development of adults (teachers); organizational theory; economics and finance (policy and reality); as well as political sources of influence. To be successful in engaging, and making progress in, research on matters of educational significance, doctoral Fellows in the proposed program will receive training in these larger methodological and conceptual frameworks as well as experience and expertise in applying these frameworks to a particular area or focus.

The UVA program is particularly well-suited to accomplish this goal because of three key features. First, the Curry School of Education has a commitment to interdisciplinary training reflected in an already-established interdisciplinary doctorate in Risk and Prevention and an interdisciplinary Master's teacher training program in Early Childhood and Developmental Risk. These initiatives created a cadre of faculty and students who have for the last three years been engaged in cross-discipline (e.g., education policy and finance, teacher education, special education, clinical and school psychology, literacy) discussions and course development. Second, the Curry School and the College of Arts and Sciences, under the direction of Provost Gene Block, have been linked under the umbrella of the Carnegie-funded Teachers for a New Era (TNE) project. A part of this project is an interdisciplinary, inter-departmental seminar involving faculty from across the University (e.g., Sociology, Economics, Psychology, Education, Physics, Chemistry, and English) with interests in questions of educational significance, particularly related to evaluating the effectiveness of teacher training. Finally, the University has put in place, at the institutional level, a commitment to interdisciplinary research and pan-university initiatives, particularly in the sector of doctoral training.

There is little doubt that the crossing of disciplinary boundaries is required to advance evidence-based solutions to problems of educational concern. The benefits of interdisciplinarity are also reciprocal, as Pianta (in press) has argued, in that the infusion of education-generated questions into other fields provides needed perspectives forcing re-evaluation of discipline-specific views. In short, interdisciplinary perspectives as applied to education sciences do not only mean the need for knowledge derived from other disciplines (e.g., child development, economics, health care, biology, family systems) but, more importantly, the capacity to integrate discipline- or domain-specific knowledge into a coherent conceptual and methodological framework that can advance the scientific understanding of children, families, and schools

Methodologically rigorous and programmatic. There is little doubt that the current system of education research, that rests on a pipeline of training typically located in schools of education and conducted in relative isolation by faculty located in and themselves trained in such schools, has failed to produce systematic and progressive gains in knowledge and practice in many critical areas (Coalition for Evidence-Based Practice, 2002; Ostriker & Kuh, 2003; Shavelson & Towne, 2002). Systematic progress in understanding, policy, and practice as a function of research in education has not proceeded in the same way progress in these areas has been evident in, for example, health care and research in the biological sciences. Education research has been neither cumulative nor effective in its ability to reach resolution on critical problems. Pressing problems in the field of education – such as understanding how individual and group differences in children's capacities should be responded to by curriculum or interactions with teachers, or through various special education placements – and the variety of costs and benefits attached to different options – persist for decades precisely because of the lack of *cumulative* research focused on resolving such questions. Without *progressive* inquiry, fundamental questions such as this cannot be solved, and empirically-derived solutions are not available to serve as a foundation for addressing new problems that emerge (Gallagher, 1998). Fundamental to the building of knowledge based on progressive, cumulative research, is

expertise in design and methodology, specifically rigorous methods that rely on psychometrically sound indicators of process and outcome, and approaches to sampling and design that yield inferences of a causal nature, or at least discernible conclusions that can be generalized.

The relative absence of both progressivity and systematic, cumulative knowledge in educational research is a consequence of myriad circumstances, such as: a) the lack of research programs focused at large multi-dimensional questions, b) a failure to appropriately align research methods and questions in a sequenced and progressive manner, c) the absence of resources and support (financial, mentoring/lab opportunities) for graduate students in education, d) the focus of doctoral training in education on professional credentialing rather than research training in an academic discipline, e) inadequate capacity of schools of education and education research to identify and utilize expertise from other fields, and/or f) pervasive disagreement among educational researchers concerning the relevance of scientific research for understanding and solving problems in education. Several of these issues are described at length, in terms of the fields of education, developmental psychology, and clinical/school psychology by Pianta (in press) and in relation to the inadequacies of research training in schools of education by Viadero (2004). These realities conspire and combine to result in the current deficit of education researchers, whereby only 7% of students earning doctorates in education in 2002 list research as the primary activity of their employment after graduation (Hoffer et al., 2003).

Adding to these influences on the lack of progressivity in educational research is the complexity of the questions needing attention and evidence. Research on education must contend with multi-level systemic influences on children (reflecting their experiences with adults, peers, and material resources at home, in the community, at school, and in classrooms) and how these influences intersect and interact with one another and with children's achievements over time (Pianta, in press). One solution to this complexity – methodologically – has been for education researchers to rely on qualitative, ethnographic methods for studying local, circumscribed situations. Qualitative methods are useful for generating hypotheses about learning and teaching and for understanding rich, complex processes and ecologies, however they have almost no generalizability, relevance for policy, or capacity to yield inferences of a causal nature. These methods do not contribute to research progressivity. Ethnographic protocols immerse researchers in the activities of participants, an approach to validity that is quite different from the internal validity protocols emphasized in clinical research paradigms and the quantitative methodologies of the physical sciences (Ostriker & Kuh, 2003; Shavelson & Towne, 2002). The dichotomies across these research paradigms and tensions within education sciences, illustrated by dialogues among researchers of reading interventions (e.g., Allington & Woodside-Jiron, 1999; Foorman, Fletcher, Francis, & Schatschneider, 2000) are distractions that undermine the extent to which research can be viewed as a primary source of information for policy-makers that also drives decisions about practices used in the field.

A guiding emphasis in the proposed program is that the complex questions that are the focus of educational policy and practice must be tackled through *progressive research programs* that rely on the systematic application of multiple methodologies, and that advance understanding in a given area of study from hypothesis-generating descriptive studies to randomized clinical trials and planned comparison studies, the latter providing the ability to make causal inferences about mechanisms responsible for effects being observed. The proposed training program, drawing from ongoing work by faculty at UVA, will train Fellows in the methods required to pursue programmatic, multi-disciplinary, multi-method lines of inquiry. Fellows will engage in research experiences that reflect a continuum of methodologies to be

applied to that Fellow's question(s) of interest. Training will reflect the spectrum of research methods in the clinical sciences: 1) *observational studies* to generate hypotheses, 2) *feasibility studies* to conduct on-experimental tests of hypotheses, 3) *early efficacy studies* to conduct quasi-experimental tests of hypotheses, 4) *later efficacy studies* to evaluate hypotheses using randomized trials, and 5) *effectiveness studies* to evaluate hypotheses using fully-powered randomized trials emphasizing external validity (Fey & Justice, 2003; Robey & Schultz, 1998). To build a cumulative knowledge base and bring evidence-based practices to education, a range of empirical approaches are required to test hypotheses programmatically (CEBP, 2002). The established research programs of the faculty supporting this training initiative provide rich and extensive opportunities for experiences in all these methods.

The role of research in practice and policy. Estimates from the medical field indicate that it can take over two decades for research outcomes on standards of practice to be translated into mainstream practices (Agency for Healthcare Research and Quality, 2001). "Bringing evidence-driven progress to education" requires building the knowledge base of education through programmatic and cumulative empirical research; promoting timely and accessible dissemination of research outcomes; and ensuring implementation of scientifically-proven practices (CEBP, 2002). The deliberate integration of scientifically-based *research*, implementation or *practice*, and federal/state/local education *policy* could have an "enduring impact on the effectiveness of U.S. elementary and secondary education" (CEBP, 2002, p. 2). The pressing need for research is indicated by the fact that the present climate of educational reform is largely characterized by implementation of policies lacking a basis in research findings and educational practices that have little effect on raising children's outcomes in math, reading, and science. There is limited, if any, research from randomized, controlled clinical trials that can be used to inform practice and policy (CEBP, 2002; Stecher & Kirby, 2004).

To promote the integration of research, practice, and policy, the proposed training program is organized around Fellow's immersion in and study of questions that are "use-inspired," or important and relevant to practitioners and policy-makers (CEBP, 2002). Given our portfolio of research programs linked to education, in their interactions with mentors and other faculty and Fellows, and in production of manuscripts, presentations, and grant proposals, Fellows confront the need to ask and answer questions that directly inform practices in schools, such as: What are the best strategies for engaging students speaking diverse first languages in instructional discourse? What characteristics of the classroom climate most influence elementary students' academic outcomes and close the economic and racial achievement gaps? What curricular approaches for early literacy instruction have the most long-lasting effect on children's word reading and reading comprehension, particularly for children coming from low-language backgrounds? What professional development models are most effective in producing gains in teaching and student performance for teachers in urban schools? What costs and gains can be attributed to different forms of teacher certification? What forms of experience in family and community settings stabilize adolescents' achievement during middle and high school?

At the same time, research needs to be translated into practices useful for professionals in the fields in a systematic, accessible way, akin to dissemination practices currently used to promote evidence-based medicine (e.g., evidence reports). Research-based "best practice reports" for teachers can acknowledge the specificity and complexity of the system in which they work and research can be conducted on ways in which best practices are integrated into teacher preparation and professional development. Our training program is committed to this interchange. One of the advantages of the proposed program for making good on this

commitment to translational research (CEBP, 2002) is that the Education School faculty (Pianta, Justice, Rimm-Kaufman, Turner, Fan) are each engaged in progressive programs of methodologically rigorous research, several of which are translational in nature in that they directly impact policy and practice in early childhood and elementary schools (Pianta, Justice, Rimm-Kaufman, Fan) through efficacy and effectiveness studies. Others' work (e.g. Turner and Johnson from Economics and Kingston/Nock from Sociology) deals directly with large-scale analysis of policy issues. In addition Psychology faculty are engaged in multi-site intervention/efficacy trials on the mechanisms of family influence on outcomes related to school readiness (Wilson); early efficacy studies on how peer relations influence school and mental health outcomes for adolescents at risk (Allen); and descriptive/efficacy research on how community-level factors divert high risk youth into more positive developmental paths (Repucci). Individually and collectively, this faculty possesses a wealth of resources from programs using rigorous research methodology to address questions of educational significance in field-based trials and policy contexts. Many of these faculty members (e.g. Pianta, Justice, Repucci, Allen) are frequent keynote presenters at state practitioner conferences as well as members of state and national policy advisory committees.

Thematic Focus: Risk and Prevention

One unifying aspect of the program is its emphasis on rigorous educationally-relevant research that is interdisciplinary, cumulative and programmatic, and that integrates research, practice, and policy, as is described in the Aim above. A second unifying aspect is the theme of *risk and prevention,* which threads through all elements of Fellow and faculty research and teaching. Because of pressing needs in the field, the proposed program is designed to systematically train students in conceptual and research paradigms in risk and prevention to provide them with the requisite tools to address the inequality and underperformance related to conditions of social, economic, disability, and ethnic variability in the US.

There are three salient reasons why a *risk and prevention framework* was selected as the thematic focus for advancing the research training goals of this project. First, there is no more serious challenge to the social fabric and economic well-being of the citizens of the US than the failure of educational institutions and processes to systematically contribute to the development of children's competencies across the entire range of the population. The University of Virginia, the founder of which Thomas Jefferson was a seminal proponent of the role of education for the public good, recognizes that research plays a foundational role in harnessing the capacity of the educational system to promote equality and opportunity. Providing evidence-based solutions that ensure high quality and effective education under conditions of risk is the key challenge going forward in this century for educational research and policy (Rutter & Maughan, 2002).

Second, risk and prevention is a concept borrowed from the interdisciplinary science of public health that provides a conceptual and methodological framework conducive to interdisciplinary work in education. Borrowing from public health, a focus on the related concepts of risk and prevention in educational contexts has arisen from a nexus of overlapping interests among scientists, policy-makers, and practitioners. In our framework, school settings are viewed as a primary locus for the delivery and infusion of resources that have a preventive or competence-enhancing effect on child development under conditions of risk (Hoagwood & Johnson, 2002; Pianta, in press). The call for scientifically-based research interventions by No Child Left Behind, which gives priority to randomized controlled trials, is consistent with the application of this public-health framework in education. In a university, in which disciplinary

boundaries can be strong and in which educational research has too often been the focus only of faculty in schools of education (Hoffer et al., 2003; Viadero, 2004), the risk and prevention paradigm can be the kind of integrative conceptual and research framework necessary for supporting an interdisciplinary focus on schooling and education. An interest in preventive intervention (often through applications in schools) has been embraced by nearly all educational and psychological researchers and policy-makers (e.g., Snow, Burns, & Griffin, 1998), and this framework will guide how students view the policy and practice implications of their work, will be reflected in topics, speakers, and discussions in the proseminar, and will be reflected in students' selection of content and research methodology courses.

Third, as we have noted above, this thematic focus harnesses an established interdisciplinary synergy in the Curry School in which the risk and prevention framework – particularly as applied to questions and practices of clear educational significance – has emerged in recent years as a unifying theme. Within Curry, a strategic planning process initiated in 2002 gave rise to faculty from various areas forming the Curry Interdisciplinary Initiative on Risk and Prevention, led by the three Curry faculty who will lead the proposed program (Pianta, Rimm-Kaufman and Justice) and including other faculty also involved in this proposal (Turner and Fan). Approximately 40 of the 100 faculty at the Curry School conduct research related to this theme and participate in activities of the initiative. Although a core emphasis in this initiative is research, policy, and practice associated with the education of younger children – particularly teaching and learning as applied to children's social relationships, language, and literacy from pre-k through elementary school– the involved faculty represent a diverse and nationally-recognized constituency with expertise ranging from violence in the schools, obesity in children, gifted and talented education, and minority participation in higher education. One activity of this initiative is a weekly speaker series funded through private resources. Thus although the proposed IES-funded program involves a core group of Curry faculty, the broad Curry strategic emphasis on risk and prevention creates an additional set of resources, in terms of interested faculty, speakers, private funds, and courses that are available to the Fellows (both 2- and 4-year) in the proposed program. In the fall of 2003, this initiative started the Curry Interdisciplinary Doctoral Training Program in Risk and Prevention, a school-wide, non-departmental program that supports intensive, rigorous doctoral training focused on risk, prevention and educational issues; this program has enrolled four students to date, drawing students from diverse social science disciplines and will serve as the recruitment conduit and training framework for the doctoral degrees for the 4-year Fellows in this proposal. In addition to Curry's focus on risk/prevention issues, work by other Fellows program faculty deals directly with risk/prevention as well. In Sociology and Economics, Kingston and Johnson study stratification and the economics of the teacher workforce as it relates to racial differences in child outcomes. In Psychology faculty study mechanisms relating experiences in school/community/family/peer settings to early readiness of African American children (Wilson), middle and high school mental health and achievement for children at social risk (Allen) and achievement, school completion, and mental health for juvenile offenders (Reppucci), as examples.

Substantive areas within the risk and prevention theme. Among the research programs conducted by the proposed University of Virginia's Interdisciplinary Doctoral Training Program in Education Sciences faculty (from Curry, Psychology, Sociology, and Economics), there are three substantive areas in which research training experiences can be immediately realized. The first focuses on *early childhood/elementary classroom context effects on child outcomes*, studying policies and classroom practices that maximize young children's academic and social

attainments in early elementary settings. The preschool/early elementary years are points in which interventions have been viewed as having leverage for promoting school performance (Entwisle & Alexander, 1999; La Paro & Pianta, 2000), particularly for classrooms with high poverty or minority composition (Rimm-Kaufman, Pianta & Cox, 2000). Pianta, Justice, Rimm-Kaufman, Fan and Wilson are each involved in programs of research aimed at improving the short- and long-term impact of early childhood/elementary education on children's literacy and other academic outcomes and social/relational competencies (preschool to grade three) through research on specific curricula, family-based interventions, models of professional development for teachers, and studies of classroom processes. Fellows will have the opportunity for extensive immersion in research programs in this broad domain.

The second area focuses on *teacher workforce quality and effects on child performance* and factors associated with and causal to the efficacy of teacher training. American schools are under increased stress because of changes in the teacher workforce. The teaching profession and the training of teachers are under a high level of scrutiny to provide convincing information that current models of teacher training add value for child outcomes. Another pressure on the profession is that one-third of new teachers leave the teaching field within three years of entering, and almost one-half of new teachers leave within five years (Ingersoll, 2001), a problem even more severe in low-income and rural or urban schools. This rapid attrition is wasteful, diluting the effectiveness of teacher training, draining schools of their intellectual capital, reducing the number of skilled, experienced, professional teachers promoting children's success, and costly in financial terms as well because of the low return on investment in pre-service training. The University of Virginia, under the auspices of Carnegie's Teachers for a New Era, is conducting a program of research designed to address teacher workforce issues through rigorous examination of the effectiveness of teacher training models, economic factors (e.g. subsidies to trainees, Teacher For America-type programs), and effects of various ways to integrate content and pedagogical knowledge in training of teachers. These factors, as a whole, are being evaluated in relation to teaching outcomes that include observed indicators of teacher quality, attrition from the field of teaching, and student performance, in order to develop a scientific basis for teacher education. Fellows will have the opportunity to design and conduct studies within this program of research targeting the teacher workforce.

A third area of substantive focus is organized around the ways in which *schools and schooling function in relation to other developmental contexts (peers, community) and influences (parenting, pubertal development, history of academic and social failure) in adolescence.* There is a considerable a gap in knowledge related to the interplay among academic achievement and cognitive, motivational, pubertal, and relational processes as children move from elementary into and through secondary (middle school, high school) school (Pianta, in press; Rutter & Maughan, 2002). Secondary school careers and transitions structure adolescence and serve as a foundation for long-term attainment, functioning as a linking mechanism between early and later stages of the life course (Csikszentmihalyi & Schneider, 2000; Eccles, Lord, Roeser, Barber, & Jozefowicz, 1997). Adolescence is a period of normative downward deflection (as occurs in middle school) and consolidation as well as upward shifts through secondary school. The role that school context plays in relation to such shifts is important for designing educationally and developmentally productive school settings. For example, positive changes in peer relations and school organization may provide a fresh start, or turning point, for underperforming students (e.g., Crosnoe, 2000). Work by several of the Fellows program faculty bears directly on the intersection of schooling and adolescent development. Pianta's affiliation with the NICHD

Study of Early Child Care and Youth Development allows Fellows to examine trajectories of achievement and social functioning in relation to family, school, and peer contexts through 8th (and possibly 10th) grade for approximately 1,000 children. Education-related questions being addressed in this data set include the value-added of schooling over the k-10 period, the role of specific academic inputs to achievement, and how high-demand courses deflect downward trajectories. Allen's work examines the role of families, school, and peers at key periods of schooling in altering trajectories of achievement from middle to high school for high risk children. Repucci's work addresses the role of schooling in the larger community in prevention and remediation of negative outcomes (school dropout, incarceration) for youth at very high risk—juvenile offenders. Collectively, this work enables Fellows to be immersed in programmatic studies of schooling during a period of developmental change and significance.

In sum, Fellows in the University of Virginia's Interdisciplinary Doctoral Training Program in Education Sciences will have ample opportunity for exposure to a wide range of programmatic research on questions of educational significance as well as opportunity for immersion and high-quality training in research programs that address larger research themes and knowledge gaps that are of pressing importance for theory, policy, and practice.

B. Organizational Structure

The proposed program is organized to provide interdisciplinary apprenticeship for 34 individual Fellows over a 5-year period (and a planned 6th year no-cost extension). Fellows will be funded for a 2-year or 4-year period of training; will engage in a systematic program of research addressing a question(s) of educational significance; be assigned for joint mentorship involving one faculty member in the Curry School of Education and one faculty member from a department in the University's College of Arts and Science (e.g., Economics, Sociology, Psychology); and will participate in a jointly-planned interdisciplinary course of study (4-year Fellows) or minor supporting area (2-year Fellows). The 22 2-year Fellows will be already engaged in a program of study in their home Department in Arts and Sciences (Economics, Sociology, Psychology) while they enroll in the proposed program's 2-year research fellowship/apprenticeship to conduct research on a question of educational significance. The 12 4-year Fellows will complete a program of study within the Curry School of Education in the Interdisciplinary Doctoral Program in Risk and Prevention, a 4-year interdisciplinary research program addressing an area of clear educational significance. We describe here key aspects of the organizational structure of the proposed program, to include 1) essential graduate training mechanisms, 2) recruitment, enrollment, and retention goals, 3) faculty and research programs, and 4) career development opportunities for fellows.

Essential graduate training mechanisms

Mentorship and advising. The program is grounded in mentorship as essential to graduate research training. Through mentorship our Fellows will develop an understanding of the linkage between research methodology and questions of substantive interest, knowledge about research integrity, and will link to a host of professional resources and opportunities. Mentorship is used as a key vehicle in our program to ensure that Fellows integrate research, practice, and policy, and that Fellows achieve an integrated knowledge base derived from the substantive domains available to them at Virginia. The program features *joint mentorship*, conducted by a faculty member in the Curry School of Education and from the College of Arts and Science that is individualized to each Fellow's program of study. Fellows meet jointly with their research mentors three (or more) times annually to review progress, align program goals with

opportunities, and identify goals and training needs. A side-benefit of joint mentorship is the linkage and integration across departments and schools of faculty resources in relation to questions of educational significance (for example see letters from Kingston, Johnson, Nock, Callahan, Luftig, and Block indicating interest in joint work).

Joint mentors will be identified for each Fellow and mentorship is the context in which questions of educational significance will be identified and form the core of the Fellows' training experience. As Fellows formulate the question(s) on which they will focus their research and training, mentors will identify policy/practice linkages and program-related research resources that can allow for examination of those linkages. Fellows will work closely with mentors over the fellowship period to focus their research training on a question(s) of significance to education within their mentors' research programs. For example, a Fellow may be mentored by Education and Psychology faculty and propose a program of research integrating cognitive science, early reading interventions and classroom context; another might focus on classroom/school effects in relation to peer effects on achievement in youth; still another might examine clinical-trial comparisons of professional development effects on classroom practice for teachers and children of diverse ethnic backgrounds. Another Fellow may be mentored by Education and Economics faculty and focus on the role that subsidies play in promoting high quality programs and long-term benefits to children exposed to early childhood settings. Still another Fellow might engage in a set of descriptive and randomized trial studies that examine organizational change, leadership, school climate, and child outcomes with Sociology, Policy Studies, and Education mentorship. Thus each Fellow will create a research plan focusing on questions of educational significance and will be trained to competently employ a range of methodological tools to develop a programmatic and progressive line of research on these question(s) of significance. The mentorship vehicle is thus a primary vehicle through which Fellows' competence in these multi-dimensional, multi-method educationally-significant achievements will be ensured.

Coursework. The common core of coursework for all 2- and 4-year Fellows will be a 2-credit weekly Proseminar and a series of courses in research methodology. In relation to the proseminar, Fellows enroll continuously in the program's "Proseminar on Interdisciplinary Perspectives and Methods in Research on Education," in which program faculty and students systematically study diverse theoretical, conceptual, methodological, policy, and practice perspectives on problems related to education's role in preventing underachievement and maladjustment in children and youth exposed to risk conditions (such as poverty or disability). This Proseminar is considered an integral and ongoing part of the Fellowship experience, providing an opportunity for intensive focus on policy and practice linkages by incorporating state and regional policymakers as well as local educational leaders and by integrating faculty participants and all Fellows together in one setting focused on discussions of research. The proposed proseminar builds on a 2-year effort within the Curry School in which students and faculty participate in a speaker series supported by the Risk and Prevention initiative. This series has brought an interdisciplinary group of eminent scholars such as Arthur Reynolds, Joyce Epstein, Ken Rubin, Deborah Vandell, Uri Treistman, Robert Selman, and Lindsay Chase-Lansdale to the School of Education for lectures and small-group meetings with students. The content for the proseminar will be developed each semester by the program faculty and will include attendance in this ongoing speaker series and related discussions.

Fellows are also required to complete at least 4 courses in research design and methods. One course, "Research Design in Education Science," will be developed by program faculty and taught by Pianta. This course will be common to all 2- and 4-year fellows and address a range of

methodological issues in the design of rigorous and progressive research on educational issues. Students will be exposed to high-quality research across a spectrum of methods and the need for designs that support causal inference. Each student will use this course as an opportunity to design and refine their own program of research to be conducted during their Fellowship. In addition, students will complete at least 3 other courses in research methods, typically one basis statistics class covering probability, correlation, and group differences, and two other courses in advance multivariate techniques (e.g., MANOVA, growth modeling, SEM). The resources for such coursework at UVA are considerable given the existing courses offered by faculty in Economics, Psychology and Education (e.g., Fan).

Other coursework requirements vary for 2-year Fellows and 4-year Fellows. The 2-year Fellows complete required coursework in their home departments of Sociology, Psychology, and Economics and are supported by this program for a 2-year Fellowship and research apprenticeship in Education that focuses on research training, data analysis, and manuscript preparation related to the lab in which they work, some of which will overlap with their Dissertation. Most 2-year fellows will have taken some coursework in education to be competitive as an applicant for the 2-year Fellowship. Fellows who have had no such experience but are otherwise well-qualified will take two substantive courses in Curry or the affiliated departments related to education during the 2-year Fellowship matched to their research interests (e.g., "Conceptualizations and Theory in Risk and Prevention," "The Ecology of School Settings, Educational Finance and Policy"; "Schooling and Social Stratification") as determined by their advisors. Fellows will enroll in 4 (or more) credits of directed research, a 3 credit research and writing seminar, and the 2-credit proseminar for each semester of the 2-year Fellowship.

The 4-year Fellows will follow the curriculum framework designed for the Curry Interdisciplinary Doctoral Training Program in Risk and Prevention. In addition to ongoing enrollment in the proseminar (2-credits) and enrollment in Research Design in Education Sciences (Pianta) core requirements include the following 3-credit courses: Conceptualizations and Theory in Risk and Prevention, Research Methods in Risk and Prevention, Statistics II, Statistics III, Multivariate Statistics, Structural Equation Modeling, Developmental Psychology, Advanced Developmental Psychology, Grant Writing, and Internship in College Teaching. In addition, 4-year Fellows take a required specialization in Economics, Sociology, or Psychology, met through four 3-hour courses in that Department. The 4-year Fellows complete 24 semester hours annually, with coursework typically completed at the end of the three years.

Research apprenticeship. Each Fellow will complete a research apprenticeship experience for their period of funded support (2 or 4 years) for a minimum of 20 hours per week, and will be assigned to a lab or research study in the Fellow's area of interest from among the opportunities provided within Curry and affiliated departments. The research apprenticeship will include a full range of experiences including research design, human subject protections training, research integrity training, data collection, transcription and coding of data, data analysis, conference proposal-writing, workshops and presentations, grant preparation, and manuscript preparation. Each Fellow will propose, with their mentors, a contract that will specify certain products to be the result of the apprenticeship. At a minimum, each 2-year Fellow will produce (as first-author) two empirical, data-oriented manuscripts for publication in refereed journals; will participate as co-author on 2 other papers (in role of analyst or writing assistant), will present original research results at 2 national/international meetings, and will participate in grant-writing. Each 4-year Fellow will participate in the same activities and produce at least 3 first-authored papers, 3 co-authorships, 3 conference presentations, and grant-writing. Based on

experience with graduate trainees we expect the quantity of products to be greater (particularly 4-year Fellows) and we emphasize these are minimal expectations.

Recruitment, enrollment, and retention goals

The University of Virginia has an exceptional record in recruitment, enrollment, and retention/graduation of high-quality doctoral students. The involved departments reflect this commitment to excellence. The tables provided in Appendix A support this contention and are background information for the following discussion of program goals and support for the likelihood we will successfully attain these goals. These tables demonstrate that the partner departments recruit large numbers of qualified applicants, enroll students with similar qualifications (e.g. mean GRE scores in excess of high 500's, 600's and 700's depending on test and department) each of which places that department in the upper ranks nationally, respectively. Retention is strong across these departments although mean time to degree is longer for the A&S departments (above 6 years) than for Curry (above 4.5). This differential in time to degree is one reason we designed to program to provide intensive training in the Arts and Sciences departments at the latter stage of doctoral training while in Curry we will support trainees throughout their roughly 4-year doctoral program.

Recruitment. The program will be publicized extensively by the University of Virginia, the Curry School of Education, and Arts and Sciences departments through their own admission websites and through websites of organizations that link to researchers and faculty in related fields (e.g., Society for Research in Child Development, American Psychological Assn.), as well as through brochures, journal advertisements (e.g., *Educational Researcher, Early Childhood Research Quarterly)*, and conferences (e.g., American Psychological Assn., American Speech-Language-Hearing Assn., American Educational Research Assn., Society for Prevention Research, American Sociological Assn., American Economics Assn.).

We will direct special recruitment/admission/retention efforts to ensure the equitable representation of women, traditionally underrepresented minority individuals, and persons with disabilities among our Fellows. In 2001, 44% of awarded doctorates were earned by women with 11% by persons from traditionally underrepresented ethnic/racial backgrounds (National Organization for Research [NORC], 2001). In education, women earned 65% of doctorates, and persons of underrepresented ethnic/racial backgrounds earned 18%. Six percent of persons in higher education are reported to have disabilities (NCES, 2000). Our target is to enroll/retain/graduate a percentage of underrepresented students comparable to those in Education: 50-60% female, 20% underrepresented minorities. We will recruit by advertising our program in periodicals directed towards persons of color (e.g., *Black Issues in Higher Education, Journals of Blacks in Higher Education),* and conducting annual program information sessions at proximate historically black colleges and universities (Hampton Univ., Howard Univ., Norfolk State Univ., North Carolina Central Univ., Virginia State Univ.). Curry has links to these programs as a function of its prior participation in an OSERS-funded training grant for young minority research faculty (directed by Dan Hallahan; see letter of support) and the resulting professional network. To recruit persons with disabilities to meet a targeted goal of 6%, we will advertise the program in the newsletter of the Association on Higher Education and Disability and in the *Journal of Postsecondary Education and Disability,* organizations/outlets working towards full participation of persons with disabilities in institutions of higher education. At the University of Virginia, we will work with the Office of Disability Services to ensure that qualified undergraduate students with disabilities have equal access to information about our program and are supported when they enroll. Admission decisions will be made by the

Recruitment, Admission, and Retention Committee. Admission decisions are based on applicants' likelihood of producing rigorous research in educational science in their career and the relevance of their work to the specific aim of the training program.

Enrollment. As shown in Table 1, target enrollment for our program is 34 Fellows (22 2-year Fellows and 12 4-year Fellows) over five years, assuming a sixth year for no-cost extension. The intention of the involved faculty and University administration (e.g., see letter from Curry Dean Breneman) is to sustain this program beyond the funding period to maintain our prominent role in preparing education researchers, securing funding from external and internal resources. Future enrollment is expected to be similar to that proposed for this period.

Table 1. ***Target Enrollment of 2- and 4-Year Fellows.***

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6 no-cost	Total
New 2-year trainees	8	5	3	3	3	0	22
Continuing 2-year trainees	0	8	5	3	3	3	
Total 2-year trainees in the program in a given year	8	13	8	6	6	3	
New 4-year trainees	3	4	5	0	0	0	12
Continuing 4-year trainees	0	3	7	12	9	5	
Total 4-year trainees in the program in a given year	3	7	12	12	9	5	
Total trainees in year	**11**	**20**	**20**	**18**	**15**	**8**	

Retention. Four of the School/College partner faculty will form a Recruitment, Admission, and Retention Committee. In addition to recruitment, this Committee will work with the entire cohort of Fellows to promote retention and to maintain training quality. The Committee will meet with Fellow cohorts in the fall and spring of each year to discuss program goals, progress, and outcomes as well as any student questions or concerns. At the same time, we believe that retention is further fostered when students feel a sense of community. This community of Fellows will be implicitly facilitated by three annual program social functions (e.g., hike, dinner) as well as monthly coffee hours held in the faculty club. The proseminar experience also provides coherence, continuity, and a sense of community in the program.

The involved faculty and Departments have solid track records for recruitment, enrollment and retention of high-quality doctoral students. Pianta, Justice, Rimm-Kaufman, and Turner played key roles in implementing the Curry Interdisciplinary Doctoral Training Program in Risk and Prevention, the framework guiding the training of the 4-year Fellows. This program, in one year, has recruited four high-quality Ph.D. students into this program, with 100% retention. Appendix A includes a table demonstrating that mean time to degree for students is roughly 6.3 for Arts and Sciences departments and 4.7 for Curry. Curry's doctoral student program completion rate for students enrolled in the past 8 years is above 80% while for the Arts and Sciences departments the corresponding rate is 70% for Psychology, 80% for Sociology, and near 40% for Economics (a result of intra-faculty variation in that department; Johnson has a high rate of retention for doctoral students).

Faculty and research programs

Faculty. The proposed doctoral program will be staffed by an interdisciplinary core faculty as well as faculty associates in the contributing departments who may provide research mentorship, courses, apprenticeship, or proseminar involvement. There are 14 core faculty. The

five faculty from Education (Pianta, Rimm-Kaufman, Justice, Turner, and Fan) will provide administrative/management leadership, advising/co-mentoring, instruction, and research opportunities. Affiliated faculty from Psychology (Allen, Repucci, Lillard, Weinfield, and Wilson), Economics (Johnson and Turner who is jointly appointed with Curry), and Sociology (Kingston and Nock) provide co-mentorship and research opportunities. Luftig coordinates TNE opportunities. See included biographical sketches for more information.

Research Programs. The 2- and 4-year Fellows will complete an intensive research apprenticeship in one or more of the labs and research programs of the core faculty. As an example of educationally-relevant research opportunities available within the Curry School of Education, the following provides an overview of several key apprenticeship possibilities.

My Teaching Partner (MTP). This is a 5-year clinical trial examination of two levels of professional development for 160 teachers in pre-k classrooms statewide in Virginia, funded through the NICHD School Readiness Consortium. Pianta is the PI; Justice and Fan are CoPIs. MTP tests the hypothesis that growth in children's academic and social competencies during the pre-k year and into kindergarten/first grade is affected by specific qualities of the classroom environment and teacher-child interactions, which in turn are influenced by the professional development intervention conditions. MTP provides teachers with access to a high value website containing more than 100 video based examples and tutorials related to implementation of curriculum, teaching tips, and high quality interactions. All enrolled teachers receive that condition. One half of enrolled teachers also receive MTP Consultancy support that involves a regular 2-week cycle of feedback to the teacher based on observation and analysis of practice. This is an innovative project in professional development research both because of its rigor as well as its basis on observation and feedback. Teachers are enrolled for 2 years. Trainees will receive exposure to clinical trials research with policy/practice implications.

NICHD Study of Early Child Care and Youth Development. This is a well-known prospective study of more than 1,000 children starting at birth and continuing through 8th grade with a proposal pending for follow-through until 10th. The study is comprehensive in its data collection on child outcomes (academic and social), family settings (observation of process and questionnaires), child care (observation of process and questionnaires) and school (classroom observations, questionnaires, and school-level finance/policy data). The data set allows for examination of how experiences in school and classroom/school resources relate to growth in and trajectories of academic, cognitive, and social/behavioral outcomes from kindergarten through high school. Trainees will obtain extensive experience in data analysis and publication through work on this project. Of particular interest is the use of growth modeling and HLM as well as econometric methods for examining natural history data and drawing inferences concerning effects. Pianta is a PI on the study.

National Center for Early Development and Learning Multi-State Pre-K study. This is a longitudinal study of the extent to which experiences in pre-k classrooms representing 6 states influence children's academic and social readiness for school through 1st grade. The study relies on repeated assessments of child outcomes and classroom environments pre-k to grade 1 and advanced quantitative techniques to provide information addressing questions of considerable importance in policy and practice. Although not a random-assignment study, this study is suitable for econometric techniques and a range of quasi-experimental studies. Also of interest is the fact that the sample of children enrolled in the study (approximately 1,000) served by these programs is characterized as high risk for school failure, mostly related to poverty. Pianta is a PI.

Teachers for a New Era (TNE). In 2003, the University of Virginia's graduate teacher training programs in the Curry School were singled out by the Carnegie Corporation of America for their Teachers for a New Era (TNE) initiative. The mission of TNE is to provide empirically-based evidence (of a causal nature) on the value of teacher training for increasing student achievement. Considerable research apprenticeship opportunities are available to test the effectiveness of strategies for teaching pre-service teachers and for improving classroom teaching, including work examining characteristics of teacher preparation in relation to variability in teacher quality during the first five years of teachers' experience in the workforce. Pianta, Rimm-Kaufman, and Justice are conducting research on classroom processes and teacher training as TNE affiliates. See letters of support from Gene Block, University Provost and TNE Principal Investigator; Victor Luftig, Director of the Center for the Liberal Arts and TNE Project Director; and David Breneman, Curry Dean.

Responsive Classrooms. Rimm-Kaufman has been leading a three year longitudinal, quasi-experimental (planned comparison) study of the efficacy of the *Responsive Classroom (RC)* Approach to teaching in elementary school. *RC* has been used widely in the US and is a well-documented set of practices, although it has not been subject to this level of rigourous evaluation. RC practices integrate social and academic learning, address discipline proactively, and increase the productivity of classrooms. This program of research identifies the ways in which using the *RC* approach contributes to teachers' improved self-efficacy and attitudes towards teaching, distinguishes how *RC* practices improve instructional quality and contributes to improved academic and social outcomes for elementary school children "at risk" and not "at risk" for school failure. Data collection will be complete in Summer, 2004 and there are many opportunities to conduct analyses on extant data.

Preschool Curriculum Evaluation Research (PCER). This randomized clinical trial funded by IES is a four-year investigation of the short- and long-term outcomes of 4-year-olds' participation in a "Language-Focused Curriculum" versus prevailing curricula. Justice, Rimm-Kaufman, and Pianta are collaborating on a series of complementary descriptive research examining classroom processes, professional development, and children's outcomes in language, literacy, and social development. Access to the cross-site data collection efforts of Mathematica Policy Group (MPR) provides Fellows will opportunities to address questions of considerable educational significance pertaining to children attending at-risk preschool programs across the nation. Justice also directs an ongoing 3-year study funded by NIH examines the outcomes of a home-based parent-implemented early literacy intervention for 4-year-old children with oral language impairments in a randomized clinical trial.

Other opportunities for training in rigorous research on questions of educational signficance are available in labs of affiliated program faculty. The opportunities are illustrated in affiliated faculty letters and biosketches and described below in Resources section.

Career development opportunities for fellows

Career development opportunities for Fellows will be individually designed, while ensuring that all Fellows achieve proficiency in research, meeting the objectives described in the program description above. Each Fellow's mentorship team will coordinate career development via three primary mechanisms: 1) discussion and goal setting; 2) preparation for and experience with professional tasks (e.g., conference presentations, paper writing, grant preparation, project management, and job application; and 3) development of networks and relationships within the field. Career development will begin in the first fellowship year. To accomplish these aims, Fellows will meet with their mentorship team three times annually to set goals and discuss

progress. Students will be required to present at conferences independently or collaboratively with their advisor(s) or other students, and will be eligible to apply for training grant funds to do so. Further, students are required to prepare and submit manuscripts for peer-reviewed journals as first and joint authors. Fellows will be included in formal and informal meetings with speakers coming to Curry for presentations (see examples noted earlier) and special efforts will be made to introduce Fellows to other researcher with shared interests at conferences. Career development issues will be raised and discussed in the proseminar. At program completion, we expect program graduates to be highly competitive for employment in the public and private sector in academic, policy, and government units.

INSTITUTIONAL COMMITMENT, MANAGEMENT, PROGRAM EVALUATION

A. The University of Virginia context.

Education practice and research is an interdisciplinary endeavor, and the University of Virginia has shown a strong and consistent commitment to this vision. For decades UVA has recognized this reality in its 5-year nationally-recognized Teacher Education program that merges content area preparation in Arts and Sciences with teaching methods at the Curry School. Interdisciplinary commitment to educational research is also evident in the UVA-Carnegie TNE program, led by Provost Gene Block. TNE creates an impetus and vehicle for collaboration focused on significant educational issues, inter-disciplinary research on teaching and learning processes, and linkages among research, practice, and policy to promote evidence-based practice. In the TNE initiative, the Provost hosts a monthly seminar focused on research on teacher education, from a value-added perspective. This seminar is attended by faculty from Sociology (Kingston), Economics (Johnson), Psychology (Weinfield), Education (Pianta, Rimm-Kaufman), and is led by faculty from the Center for Liberal Arts (Luftig). Importantly, the focus on this seminar is the design and implementation of methodologically rigorous research on teacher education. In short, commitment at the University level is strong (see letter from Block) as well as the level of the Curry School of Education (see letters from Dean Breneman and chairs Callahan, Reeve, and Hallahan) and the chairs of Economics (see letter from chair Mills), Psychology (see letter from chair Wilson), and Sociology (see letter from chair Kingston).

B. Description of Plans and Procedures for the Management of the Program

Direction of program. Pianta will direct the program for the funded period, during which Rimm-Kaufman and Justice will serve as Co-Directors. Dr. Pianta has considerable expertise with program direction and management, and we capitalize upon this by building into our proposal the opportunity for Pianta to mentor Rimm-Kaufman and Justice in leadership and program management. A part-time Program Coordinator will manage day-to-day operations, to include requests for materials, monitoring the application process, course scheduling, preparation of recruitment materials, budget management, and monitoring program assessment and evaluation. This management team (Pianta, Justice, Rimm-Kaufman, and coordinator) will meet biweekly and be in contact daily via email etc to discuss program activities and progress. Pianta will also ensure that all affiliated faculty are in regular communication with one another related to management and coordination issues. Email is the likely method of communication. The Program Coordinator will carry out daily management activities via a management calendar/timeline.

The affiliated core faculty from Curry, Psychology, Sociology, and Education will meet twice annually to discuss the direction of the program, select speakers for the existing speaker series, and discuss enrollment and recruitment. Two working committees – a) Admissions, Recruitment and Retention, and b) Curriculum – each comprising four members, will be formed and charged with specific tasks and timelines for completion. Specifically, the Admissions Committee (led by Pianta) will meet three times during each fall to address recruitment plans, review applications, and evaluate progress and retention of enrolled students. The Curriculum Committee (led by Rimm-Kaufman and Justice) will meet four times during the first year and twice a year in subsequent years to plan the proseminar/research seminars.

Application and admissions. There will be a separate enrollment process for the 2- and 4-year Fellows. The 2-year Fellows, all of whom will be Ph.D. students enrolled in Arts and Science Departments (Economics, Sociology, Psychology) or Curry apply by submitting a statement of goals, a detailed plan of their anticipated educationally-relevant research, and a letter from a faculty person within their department noting the students' merits and faculty commitment to co-mentor. We will recruit these students from among students already enrolled in doctoral study, thus Year 1 we enroll eight 2-year Fellows to create an early core of students. The number of 2-year Fellows decreases subsequently to 5 in year 2, and 3 in years 3-5, for a total training goal of 22 2-year Fellows, all of whom will complete an intensive 2-year interdisciplinary research apprenticeship, the proseminar, and coursework in education and research methods.

The 4-year students will apply for admission directly to the Curry School, following a standardized format using grades, GRE scores, a statement of purpose, and three letters of recommendation. Admission decisions will be made by consensus of the program's Admissions/Recruitment/Retention Committee. In the first year, we intend to enroll 3 4-year Fellows, and 4 and 5 in years 2 and 3, respectively, for a total training goal of 12 4-year Fellows. Fewer four-year enrollees will be taken during year 1 because of the timing of recruitment. Should the situation arise where the number of highly qualified applicants is less than the number of spots allocated in years one, two, and three, we will admit more students in year four and secure additional funding for their fifth year and sixth years.

Advising. For the 4-year Fellows, each student starts with a Curry advisor. Soon in the Fall of the first year, the student and initial advisor secure a co-mentor from Economics, Sociology or Psychology. The co-mentors then advise the student in his or her coursework, guide development of a research program and develop a contract describing the student's particular ways of meeting program requirements. Joint advising meetings with the student occur 3 times each year to discuss progress. For the 2-year Fellows, primary advising for the students' initial course of study in Sociology, Economics, or Psychology will follow departmental guidelines. With students' acceptance to the Fellowship, a co-mentor from among the Curry core faculty will be assigned based on research interests. The co-mentors will work closely with the student during the 2-year fellowship period as the student completes a research apprenticeship producing research in an area of educational significance. Joint advising meetings will be held three times a year and each student's progress will be managed via a contract/program of study.

Allocation of program funds. Fund allocation decisions will be made by the PD and co-PDs in consensus with the affiliated program faculty. Standard levels of support for Fellows (2- and 4-year) will be $30,000 in fellowship support each year as a Fellow (2 or 4 years) and $10,500 in tuition annually for each enrolled student (2- or 4- year) during their time as a Fellow. In addition, we plan to offer funds to offset Fellows' routine research expenses, divided into six

$3,000 and seven $1,000 mini-awards to be allocated to based on proposals responding to a formalized RFP.

Program evaluation. Several strategies will be used for formative and summative assessment of student, faculty, and program progress and outcomes. Descriptions follow.

Student progress. There will be yearly progress evaluations for each student as one of the three-times yearly joint advising meetings. This evaluation will be conducted using the student's contract/program of study as the basis and a report will be transmitted to each student and to the Program Coordinator, who will compile information across students for review by the full faculty. The Coordinator will also gather information on course grades, courses taken, projects upon which students are currently working, progress toward completed manuscripts (submitted, in press, published) and grants. The faculty will meet annually to review all students' progress evaluations and comment upon the students' goals for the subsequent year. Documenting of these formative measures will be maintained in Fellow portfolios by the program administrator. As summative measures, two-year and four-year students will complete a questionnaire developed by the NRC designed to study educational processes of research programs and the quality of students' educational experiences (Ostriker & Kuh, 2004). Upon completion of the dissertation, the Coordinator will ask students to complete a confidential questionnaire that includes a variety of demographic questions (e.g., age, gender, citizenship, ethnicity, marital status), and detailed investigation of program environment (e.g., student access to career advice, student access to technologies), research productivity (e.g., number of research presentations, number of refereed publications, number of research awards), professional development (e.g., teaching, experiences mentoring other students), and future career goals.

Faculty progress. We will utilize the10-point list of characteristics of program faculty identified by NRC (2002) to document the strengths and needs of our program faculty on an annual basis, including number of faculty, characteristics (e.g., rank, gender, ethnicity, years since PhD), research support, interdisciplinary appointments, awards, publications, and citations. At the end of the third year and the fifth year we will conduct a summative assessment of program faculty using the procedures of the NRC's (2002) measurement of the quality of research doctorate programs. This review will be conducted by a consultant (a visiting faculty member) in risk and prevention research and education sciences, who is independent of UVA. The consultant will focus on identifying our program's *reputational quality*, for national recognition for educational research (NRC, 2003). The consultant will also review specific papers produced by faculty and faculty-student pairs for a more in-depth analysis of faculty scholarship and will review documentation of student and faculty outcomes noted above. The goal is to determine quality of our program and faculty scholarship and to set goals.

Program outcomes. We will utilize the 20-point list of characteristics of effective research doctorate programs (NRC, 2002) to document strengths and needs annually. Specific data include financial support for students, student workspace, GRE scores, number of acceptances, number of enrollees, awards for research , program support for student travel, program support for student research, teaching skill support, laboratory space, and collection of student outcomes. The core faculty will collect and examine these data to review program accomplishments and to set goals for the next year. To characterize program effectiveness we will draw descriptive, normative, and impact data from the NRC instruments previously described. *Descriptive data* provide details about certain conditions (e.g., the number of students matriculating annually, the rate of retention of students). *Normative data* compare expected to actual or observed outcomes, such as the number of students achieving a certain criterion (e.g.,

annual acceptance of a peer-reviewed manuscript) relative to an expected goal (e.g., 100% of students). *Impact data* attempt to demonstrate cause-and-effect relationships (e.g., the number of students achieving a certain criterion compared to a normative or control sample). We recognize the value of impact data in determining program effectiveness, and we will use a comparison group of Curry students to evaluate program effectiveness on specific criteria.

C. Recruitment and Retention of Graduate Students at the University of Virginia

The University of Virginia is a Research 1 institution currently ranked as the best public university in the US in the 2004 US News and World Report rankings. UVA has an exceptional record in recruitment, enrollment, and retention/graduation of high-quality doctoral students. The tables in Appendix A demonstrate that the partner departments recruit large numbers of qualified applicants and enroll students with similar qualifications each of which places that department in the upper ranks nationally, respectively. Retention is strong across these departments although mean time to degree is longer for the A&S departments (above 6 years) than for Curry (above 4.5). This differential in time to degree is one reason we designed to program to provide intensive training in the Arts and Sciences departments at the latter stage of doctoral training while in Curry we will support trainees throughout their roughly 4-year doctoral program. Curry's doctoral student program completion rate for students enrolled in the past 8 years is above 80% while for the Arts and Sciences departments the corresponding rate is 70% for Psychology, 80% for Sociology, and near 40% for Economics (a result of intra-faculty variation in that department; Johnson has a high rate of retention for doctoral students).

D. Letter of commitment from senior administration.

See Appendix A for letters of support from University Provost Gene Block, Curry School Dean David Breneman, and chairs from Economics, Sociology, and Psychology.

PERSONNEL

Robert Pianta, Ph.D., Project Director, Education. Pianta is a PI on two NICHD-funded grants (NICHD Study of Early Child Care and Youth Development and Web-based training in literacy and relationships), the NCEDL Multi-State Pre-K Study and a grant from the Foundation for Child Development. He is a consultant on more than a half dozen NIH-funded projects, is the author of more than 100 peer-reviewed papers related to education and development, and is Editor of the *Journal of School Psychology*. He is well-qualified to direct this project having directed three other interdisciplinary graduate training projects (OSERS-funded). He is also a mentor in the APA/IES sponsored PERT post-doctoral training initiative.

Sara Rimm-Kaufman, Ph.D., Project Co-Director, Education. Rimm-Kaufman directs the Responsive Classroom planned comparison efficacy study in Stamford CT and manages the work of several graduate students and research assistants. She is an active participant in the Curry Interdisciplinary Doctoral Training Program in Risk and Prevention, has authored or co-authored more than a dozen papers on classroom processes, transition to school, and family involvement. She is active in Teachers for a New Era.

Laura Justice, Ph.D., Project Co-Director, Education. Justice is PI for the University of Virginia site for the Preschool Curriculum Evaluation Research (PCER) randomized clinical trial funded by IES, and is PI on two NIH-funded studies of preschool literacy development. She is also CoPI on the NICHD-funded Web-training Readiness study led by Pianta, the Associate Editor for child language and literacy for *Language, Speech, and Hearing Services in Schools*,

the author of over 40 peer-reviewed papers on early language and literacy development, is an active participant in the Curry Interdisciplinary Doctoral Training Program in Risk and Prevention, and participates on numerous state and national policy boards.

Joe Allen, Ph.D., Affiliated faculty, Psychology. Allen studies adolescent social development, family relations, peer relations and the achievement and mental health outcomes of youth. He is PI on several NIH-funded projects related to youth development that include a focus on youth experiences in school and achievement/social functioning in school settings.

Xitao Fan, Ph.D., Affiliated faculty, Education. Fan is CoPI on the NICHD-funded Web-training in pre-k study as well as NICHD-funded study of adoption and adolescent well-being. He is Editor of *Educational and Psychological Measurement* and an internationally-known authority on quantitative analysis, particularly growth curve modeling and SEM. He will participate in proseminar meetings and in providing analytic support and instruction to Fellows.

Paul Kingston, Ph.D., Affiliated faculty, Sociology Kingston's interests are stratification; the sociology of education, and especially the connection between schooling and stratification. Kingston is active in TNE and is now working, with graduate student collaborators, on educational attainment and teacher qualification. This research has developed from his earlier work on credentialism in the labor market. Kingston served as an associate editor for *Social Forces, Sociology of Education,* and *Journal of Family Issues.*

Angel Lillard, Ph.D., Affiliated faculty, Psychology. Lillard studies social and cognitive development in early childhood with NICHD support. She also examines processes related to cognition in work on theory of mind and pretend play. She has conducted extensive research on Montessori approaches to education and child cognitive development.

Victor Luftig, Ph.D., Affiliated faculty, English and Center for the Liberal Arts. Luftig will coordinate Fellows' opportunities for research in the Teachers for a New Era program.

William Johnson, Ph.D., Affiliated faculty, Economics. Johnson examines distributional effects of public higher education subsidies; black-white wage differences; and the economics of the education labor force. He is an active TNE participant, leading work to examine costs and benefits of teacher training and he is also particularly interested in the black-white achievement gap and vouchers. He brings expertise in econometric methods.

Steve Nock, Ph.D., Affiliated faculty, Sociology Nock is co-founder of the UVA Center for Children, Families, and the Law. He studies the causes and consequences of change in the American family and its association with other institutions, such as schools. He has collaborated on NSF-funded projects investigating family processes and collaborated on NIH-funded research using behavioral genetics designs. His most recent book, won the William J. Good Book Award from the American Sociological Association for the most outstanding contribution to family scholarship in 1999.

Dick Repucci, Ph.D., Affiliated faculty, Psychology Repucci has been funded by a range of private foundations and Federal agencies to conduct research on children, families and the law, including adolescent decision making in legal contexts; adolescent development and juvenile justice; risk and protective factors in youth violence; custodial preference in divorce, and other issues related to the legal system and public policy. This work integrates measurement of school outcomes and school settings. He teaches in community psychology and prevention science in relation to children and families.

Sarah Turner, Ph.D., Affiliated faculty, Economics and Education. Turner studies the economics of education, labor economics, and public finance. She is an expert in

econometric methods, using these methods in studies of voucher and subsidy effects on educational outcomes and is particularly interested in the finance of teacher training.

Nancy Weinfield, Ph.D., Affiliated faculty, Psychology. Weinfield studies development in middle-school, particularly the intersection of family context, school context, peer relations, and children's academic and social outcomes. Her lab has several studies focusing on this topic and she has proposals for funding pending review.

Melvin Wilson, Ph.D., Affiliated faculty, Psychology. Wilson's activities generally focus on understanding contextual processes and outcomes in African American families and service delivery in domestic violence issues. Wilson is a CoPI on a multi-site clinical trial focused on evaluating a service delivery model for preventing effects of family violence on children's school readiness and related family/child outcomes.

RESOURCES

Each department (see letters) has committed space for faculty and graduate students affiliated with the proposed program. All resources necessary for program management and communication are provided. Each affiliated faculty member and department has graduate student recruitment procedures including personal and organizational websites and departments have staff for graduate student recruitment and program monitoring. All affiliated faculty and programs are currently advising doctoral students with an interest in educational research, so recruitment in the first years of the program will be successful. As noted in several places earlier in this proposal, the affiliated faculty (individually and collectively) operate and lead research laboratories that provide students with rich opportunities for training and immersion in the full spectrum of research methods and focus on questions of educational significance. The program faculty members are by and large senior leaders in their field with rising junior investigators with demonstrated research expertise. In addition, the proposed program has commitment from senior leadership at the University. Rather than repeat the description of the range, nature, and quality of resources available to the proposed program, readers are referred to detailed descriptions provided elsewhere in the narrative and in Appendix A.

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National Center for Education Statistics (2000). *Postsecondary students with disabilities: Enrollment, services, and persistence.* [Brochure] Washington, DC: U.S. Department of Education, Office of Educational Research and Improvement.

National Organization for Research (2001). *The Survey of Doctoral Recipients 2001.* Chicago, IL: University of Chicago, National Organization for Research.

Ostriker, J. P., & Kuh, C. V. (Eds.). (2003) *Assessing research doctorate programs: A methodology study.* Washington, DC: National Academies Press.

Pianta, R. C. (in press). Schools, schooling, and developmental psychopathology. In D. Cicchetti (Ed.), *Handbook of Developmental Psychopathology, Vol. II.*

Rimm-Kaufman, S. E., Pianta, R. C., & Cox, M. J. (2000). Teacher's judgments of problems in the transition to kindergarten. *Early Childhood Research Quarterly, 15(2),* 147-166.

Robey, R., & Schultz, M. (1998). A model for conducting clinical-outcome research: An adaptation of the standard protocol for use in aphasiology. *Aphasiology, 12,* 787-810.

Rutter, M., & Maughan, B. (2002). School effectiveness findings, 1979-2002. *Journal of School Psychology, 40(6),* 451-475.

Shavelson, R. J., & Towne, L. (Eds.). *Scientific Research in Education.* Washington, DC: National Academic Press.

Snow, C., Burns, M. S., & Griffin, P. (Eds.) (1998). *Preventing reading difficulties in young children. Washington,* DC: National Academy Press.

Stecher, B. & Kirby, S. N. (2004). Organizational Improvement and Accountability: Lessons for Education from Other Sectors. Available at: http://www.rand.org/publications/MG/MG136/

Viadero, D. (2004). The skills gap. *Education Week, 23*(16), 30, 31, 33.

Robert C. Pianta
Novartis Professor of Education,
Curry School of Education, University of Virginia (UVA)

Education

University of Connecticut, Storrs, CT, B.S., 1978, Special Education
University of Connecticut, Storrs, CT, M.A., 1978, Special Education
University of Minnesota, Minneapolis, MN, Ph.D., 1986, Psychology

Positions and Employment

1986-1992	Assistant Professor, Curry Programs in Clinical and School Psychology, UVA.
1992-1997	Associate Professor, Curry Programs in Clinical and School Psychology, UVA
1993-1994	Visiting Associate Professor, Institute of Child Development, University of Minnesota, Minneapolis, MN.
2002-2005	Adjunct Professor, Stavanger University College, Stavanger, Norway.
1997-2003	William Clay Parrish Jr. Professor, Curry Programs in Clinical and School Psychology, University of Virginia
2003-present	Novartis Professor of Education, Curry School of Education, UVA

Selected Other Experience and Professional Memberships

1988-present	Licensed Psychologist, Commonwealth of Virginia.
1996-2001	Co-Director, Kindergarten Transitions Core, National Center on Early Learning and Development.
1994-present	Steering Committee, NICHD Study of Early Child Care.
2001-present	Co-Principal Investigator, National Center for Early Development and Learning.
1999-present	Editor, *Journal of School Psychology*.

Honors

2003	Best Article Award, *Journal of School Psychology*, Soc. for the Study of School Psychology
2003	Outstanding Professor of the Year, Curry School of Education, University of Virginia.
2002	AERA Review of Research Award, American Educational Research Association
2001	Lucille E. Michie Award, Curry Programs in Clinical and School Psychology, UVA
1997	Theodore D. Tjossem Memorial Lecture & Workshop, Center for Human Dev. & Disability, Univ. of Washington.
1993-1994	Sesquicentennial Award, Center for Advanced Study, University of Virginia.

Selected Peer-Reviewed Publications

1. Pianta, R., & Stuhlman, M. (in press). Conceptualizing risks in relational terms: Associations among the quality of child-adult relationships prior to school entry and children's developmental outcomes in first grade. *Educational and Child Psychology.*
2. Morrison, E., Rimm-Kaufman, S., & Pianta, R. (2003). A longitudinal study of mother-child interactions at school entry and social and academic outcomes in middle school. *Journal of School Psychology, 41(3),* 185-200.
3. Sbarra, D., & Pianta, R. (2002). The behavioral and emotional correlates of epilepsy: A seven-year longitudinal study. *Epilepsy and Behavior, 3(4),* 358-367.
4. Rimm-Kaufman, S., Pianta, R., Cox, M., & Bradley, R. (2003). Teacher-rated family involvement and children's social and academic outcomes in kindergarten. *Early Education & Development, 14(2),* 179-198.
5. La Paro, K, Kraft-Sayre, M., & Pianta, R. (2003). Preschool to kindergarten transition activities: Involvement and satisfaction of families and teachers. *Journal of Research in*

Childhood Education, 17(2), 147-158.
6. Konold, T., Hamre, B., & Pianta, R. (2003). Measuring problem behaviors in young children. *Behavioral Disorders, 28(2),* 111-123..
7. Pianta, R. C., & La Paro, K. (2003). Improving early school success. *Educational Leadership, 60(7),* 24-29.
8. Britner, P. A., Morog, M. C., Pianta, R. C., & Marvin, R. S. (2003). Stress and coping: A comparison self-report measures of functioning in families of young children with cerebral palsy or no medical diagnosis. *Journal of child and Family Studies, 12(3),*335-348.
9. Burchinal, M, Peisner-Feinberg, E., Pianta, R., & Howes, C. (2002). Development of academic skills from preschool through second grade: Family and classroom predictors of developmental trajectories. *Journal of School Psychology, 40(5),* 415-436.
10. La Paro, K., Olson, K., & Pianta, R. (2002) Special education eligibility: Developmental precursors over the first three years of life. *Exceptional Children, 69(1),* 55-66.
11. Rimm-Kaufman, S., Early, D., Cox, M. Saluja, J., Pianta, R., Bradley, R., & Payne, C. (2002). Early behavioral attributes and teachers' sensitivity as predictors of competent behavior in the kindergarten classroom. *Journal of Applied Developmental Psychology, 23,* 451-470..
12. Early, D., Rimm-Kaufman, S., Cox, M., Saluja, G., Pianta, R., Bradley, R., & Payne, C. (2002). Maternal sensitivity and wariness in the transition to kindergarten. *Parenting: Science and Practice, 2(4),* 355-377.
13. Stuhlman, M., & Pianta, R. (2002). Teachers' narratives about their relationships with children: Associations with behavior in classrooms. *School Psychology Review, 31(2),* 148-163.
14. Olrick, J., Pianta, R., & Marvin, R. (2002). Mothers' and fathers' responses to signals of children with cerebral palsy during feeding. *Journal of Developmental and Physical Disabilities, 14(1),* 1-17.
15. La Paro, K., Pianta, R., Payne, C., Cox, M., & Bradley, R. (2002). The relation of kindergarten classroom environment to teacher, family, and school characteristics and child outcomes. *Elementary School Journal, 102(3),* 225-238.
16. La Paro, K., & Pianta, R. C. (2001). Predicting children's competence in the early school years: A meta-analytic review. *Review of Educational Research, 70(4),* 443-484.
17. Early, D., Pianta, R., Taylor, L., & Cox, M. (2001). Transition practices: Findings from a national survey of kindergarten teachers. *Early Childhood Education Journal, 28(3),* 199-206.
18. Button, S., Pianta, R., & Marvin, R. (2001). Mothers' representations of relationships with their children: Relations with parenting behavior, mother characteristics, and child disability status. *Social Development, 10(4),* 455-472.
19. Button, S., Pianta, R., & Marvin, R. (2001). Partner support and maternal stress in families raising young children with cerebral palsy. *Journal of Developmental and Physical Disabilities, 13(1),* 61-81.
20. Saft, E., & Pianta, R. (2001). Teachers' perceptions of their relationships with students: Relations with child and teacher characteristics. *School Psychology Quarterly, 16(2),* 125-141.
21. Sayre, J., Pianta, R., Marvin, R, & Saft, E. (2001) Mothers' representations of relationships with their children: Relations with mother characteristics and their feeding sensitivity. *Journal of Pediatric Psychology, 26(6),* 375-384.
22. Rimm-Kaufman, S., & Pianta, R. (2001). An ecological perspective on the transition to kindergarten: A theoretical framework to guide empirical research. *Journal of Applied Developmental Psychology, 21(5),* 491-511.
23. Pianta, R. C., Kraft-Sayre, M., Rimm-Kaufman, S., Gercke, N., & Higgins, T. (2001).

Collaboration in building partnerships between families and schools: The National Center for Early Development and Learning's Kindergarten Transition Intervention. *Early Childhood Research Quarterly, 16(1)*, 117-132.

24. Hamre, B. K., & Pianta, R. C. (2001). Early teacher-child relationships and the trajectory of children's school outcomes through eighth-grade. *Child Development, 72(2)*, 625-638.
25. Pianta, R. C., & Early, D. (2001). Turnover in kindergarten classroom membership in a national sample. *Early Education & Development, 12(2)*, 239-252.

Selected NICHD Early Child Care Research Network (Corporate Authorship):

26. NICHD Early Child Care Research Network. (in press). Social functioning in first grade: Associations with earlier home and child care predictors and with current classroom experiences. *Child Development.*
27. NICHD Early Child Care Research Network. (in press). Are child developmental outcomes related to before- and after-school care arrangements? *Child Development.*
28. NICHD Early Child Care Research Network. (in press). Child care predictors of infants' and toddlers' sustained attention in child care. *Developmental Psychology.*
29. NICHD Early Child Care Research Network. (2003). Modeling the impacts of child care quality on children's preschool cognitive development. *Child Development, 74,* 1454-1475.
30. NICHD Early Child Care Research Network. (2003). Child care and communicable illnesses, ages 36 to 54 months. *Archives of Pediatrics and Adolescent Medicine, 157,* 196-200.

Selected Research Support

Pianta, R., Kinzie, M., Justice, L., Pullen, P., Fan, X., & Lloyd, J., 2003-2008, Web Training: Pre-K Teachers, Literacy, and Relationships, Effectiveness of Early Childhood Program, Curricula, and Interventions, NICHD, Role: PI

Justice, L., & Pianta, R., 2003-2005, Early Literacy Intervention, NICHD. Role: Co-Investigator.

Pianta, R., Vernon-Feagans, L., 2002-2007, Rural Children Living in Poverty. Department of Health and Human Services, Role: Co-Investigator

Pianta, R. C., 2001-2004, National Center for Early Development and Learning. Subcontract to the University of North Carolina—Chapel Hill. Office of Educational Research and Improvement, U.S. Department of Education. Role: Co-Principal Investigator.

Pianta, R. C., 1999-2004, The NICHD Study of Early Child Care and Youth Development Phase III. Extension of Cooperative Agreement U-10 HD 25449. Role: PI.

Pianta, R., Lloyd, J., Invernizzi, M., Justice, L, & Pullen, P., 2002-2003, Pre-Kindergarten Curriculum: Literacy and Relationships. Early Childhood Education and School Readiness Planning Grants, National Institutes of Health, $125,000 direct costs. Role: Co-PI

Rimm-Kaufman, S., Pianta, R. C., & La Paro, K., 2000-2002, Effects of the Responsive Classroom Approach on children's school outcomes. Northeast Foundation for Children, Role: Co-Investigator

Pianta, R. C., 1997-2002, Studies on literacy skills and practices for high-risk four-year olds. Co-Investigator, Subcontract to Center for Improvement in Early Reading Achievement, Office of Educational Research and Improvement. Role: Co-Principal Investigator

Pianta, R. C., 1996-2001, Kindergarten Transitions Core. Subcontract to National Center on Early Learning Development, University of North Carolina, Chapel Hill. Office of Educational Research and Improvement, U.S. Department of Education. Role: Co-PI

Pianta, R. C., 1995-1999, The NICHD Study of Early Child Care: Phase II. Extension of Cooperative Agreement U-10 HD 25449. Role: Principal Investigator

Laura Justice, PhD.
McGuffey Reading Center
Curry School of Education

Overview of Current Work

As director of the Preschool Language and Literacy Research Lab in the Curry School of Education, I am involved with a broad range of investigations examining language and literacy development and intervention for preschool children, primarily focusing on those at risk. This research ranges descriptive, basic research on mechanisms of early literacy and language development to applied fully-randomized clinical trials focused on intervention outcomes. Major current projects involve (1) an effectiveness study of a home-based parent intervention for year-old children with language impairment addressing early literacy development, (2) an effectiveness study of a language-focused curriculum for preschool programs enrolling 4-year-old children from disadvantaged homes, and (3) a feasibility study investigating use of specific interactional techniques to promote children's early orthographic processing.

Current Mentorship

- 1 Post-Doctoral Research Scientist present)
- Current doctoral committees: 9 Chair (1 Risk and Prevention, 1 Special Education, 7 Reading), 6 Committee

Current Federal Funding

- NIH/NICHD, "Early Literacy Intervention" [R03 DC004933-01A2; 01/23/2003 – 12/31/2005; 17% effort; PI]
- NIH/NICHD, "Influences on Preschoolers' Visual Attention to Print" [1R03 HD043204-01; 6/01/2003 – 5/31/2005; 17% effort; PI]
- USDOE-IES, "Short-and long-term outcomes of the Language Focused Curriculum for Head Start Children" [84.305J; 7/15/03 -7/14/2007; 43% effort; PI]
- NIH/NICHD, "Web Training: Pre-K Teachers, Literacy Relationships" [1 R01 HD46061-01; 009/26/03 – 7/31/2008; 10% effort; Co-I]

Brief Vitae

Degrees

2000	Ph.D., Speech and Hearing Sciences, Ohio University
1996	M.Ed., Special Education, Ohio University
1992	B.A., English Literature and Language, Ohio University

Current Position (August, 2000 to present)
Curry School of Education, University of Virginia, Charlottesville Virginia

- Assistant Professor: McGuffey Reading Center, Early Childhood Developmental Risk, Interdisciplinary Doctoral Training Program in Risk and Prevention
- Director, Preschool Language Literacy Lab, McGuffey Reading Center

Recent Honors

2002: Distinguished Finalist, Outstanding Dissertation of the Year, International Reading Assoc
2003: Early Career Publication Award, Council for Exceptional Children Division of Research
2003: Higher Education Mentor, American Speech-Language-Hearing Association
2004: Erskine Fellowship, University of Canterbury, Christchurch, New

Current Review Boards

- Associate Editor (child language and literacy), *Language, Speech, and Hearing Services in Schools* (11/2003--)
- *Contemporary Issues in Communicative Science and Disorders* (200 1 --)
- *Early Education and Development* (2001--)
- *Education and Treatment of Children* (2000--)
- *Journal of Literacy Research* (2003-)
- *Reading Teacher* (2003--)

Recent Peer-Review Manuscripts (Abbreviated)

Ezell, H.K., & Justice, L.M. (2000). Increasing the print focus of shared reading interactions through observational learning. *American Journal of Speech-Language Pathology, 9, 36-47.*

Ezell, H.K., Justice, L.M., & Parsons, D. (2000). A clinic-based book reading intervention for parents and their preschoolers with communication impairment. *Child Language Teaching and Therapy, 16*, 121-140.

Justice, L.M., & Ezell, H.K. (2000). Stimulating children's print and word awareness through home-based parent intervention. *American Journal of Speech-Language Pathology, 9,* 257-269.

Kaderavek, J., &Justice, L.M. (2000). Children with learning disabilities as emergent readers: Bridging the gap to conventional reading. *Intervention in School and Clinic, 36*, 82-93.

Justice, L.M., & Ezell, H.K. (2001). Descriptive analysis of written language awareness in children low income households. *Communication Disorders Quarterly, 22*, 134.

Justice, L.M., & Ezell, H.K. (2001). Word and print awareness in 4-year old children. *Child Language Teaching and Therapy, 17*,207-225.

Justice, L.M. (2002). Influences on preschoolers' novel word learning during shared storybook reading. *Reading Psychology, 23*, 87-106.

Justice, L.M., & Ezell, H.K. (2002). Use of storybook reading to increase print awareness in at-risk children. *American Journal of Speech-Language Pathology, 11*, 17-29.

Justice, L.M., Invernizzi, M.A., & Meier, J.D. (2002). Designing and implementing an early literacy screening protocol: Suggestions for the speech-language pathologist. *Language, Speech, and Hearing Services in Schools, 33*, 84-10 1.

Justice, L. M., & Kaderavek, L. M. (2002). Using shared book reading to promote emergent literacy. *Teaching Exceptional Children,* 34, 8-13.

Justice, L.M., Mattingly, S., Ezell, H.K., & Bakeman, R. (2002). A sequential analysis of children's responsiveness to parental references to print during shared storybook reading. *American Journal of Speech-Language Pathology, 11,* 30-40.

Kaderavek, J., & Justice, L. M. (2002). Shared storybook reading as an intervention context: Practices and potential pitfalls. *American Journal of Speech-Language Pathology,* 11,

395-406.
Justice, L. M., & Lankford, C. (2003). Preschool children's visual attention to print during storybook reading: Pilot findings. *Communication Disorders Quarterly,* 24, 11-21.
Justice, L. M., Chow, S. M., Michel, C., Flanigan, K., & Colton, S. (2003). Emergent literacy intervention for vulnerable preschoolers: Relative effects of two approaches. *American Journal of Speech-Language Pathology, 12,* 320-332.
Justice, L. M., Kaderavek, J. (2003). Topic control during shared storybook reading: Mothers and their children with mild to moderate language impairment. *Topics in Early Childhood Special Education, 23*, 137-150.
Justice, L. M., & Pullen, P. (2003). Early literacy intervention strategies: A review of promising findings. *Topics in Early Childhood Special Education, 23,* 99-113.
Justice, L. M., & Purcell, T. (2003). Promoting cross-disciplinary collaboration at the pre-professional level: The reading specialist in the speech-language clinic. *Contemporary Issues in Communication Science and Disorders, 30*, 70-76.
Welsch, J. G., Sullivan, A. K., & Justice, L. M. (2003). That's my name!: What preschoolers' name writing can tell us about emergent literacy knowledge. *Journal of Literacy Research, 35,* 757-776.
Justice, L. M., Ezell, H. K. (2004). Print referencing: An emergent literacy enhancement technique and its clinical applications. *Language, Speech, and Hearing Services in Schools, 35*, 185-193.
Justice, L. M., &Kaderavek, J. (2004). Exploring the continuum of emergent to conventional literacy: Transitioning special learners. *Reading and Writing Quarterly, 20(3).*
Walpole, S., Justice, L.M., & Invernizzi, M. A. (2004). Case study of an exemplary elementary school: Research to practice through curricular reform. *Reading and Writing Quarterly, 20(3).*
Curenton, S., & Justice, L. M. (In Press). Low-income preschoolers' use of decontextualized discourse: Literate language features in spoken narratives. *Language, Speech, and Hearing Services in Schools.*
Justice, L. M. (In Press). A team-based action plan for creating language-rich preschool classroom environments. *Teaching Exceptional Children.*
Justice, L. M., & Kaderavek, J. (In Press). Embedded-explicit emergent literacy I: Background and description of approach. *Language, Speech, and Hearing in Schools.*
Justice, L. M., Meier, J., Walpole, **S.** (In Press). Learning new words storybooks: Findings from an intervention with at-risk kindergarteners. *Language, Speech, and Hearing in Schools.*
Kaderavek, J., & Justice, L. M. (In Press). Embedded-explicit emergent literacy Goal selection and implementation in the early childhood classroom. *Language, Speech, and Hearing Services in Schools.*
Kaderavek, J., & Justice, L. M. (In Press). The effect of book genre in the repeated readings of mothers and their children with language impairment: A pilot investigation. *Child Language Teaching and Therapy*
Walpole, S., Chow, S. M., & Justice, L. M. (In Press). The pathway to literacy for at-risk kindergarteners. *Early Education and Development.*

Sara E. Rimm-Kaufman
Educational Psychology
Curry School of Education

Overview of Current Work

My research bridges the fields of developmental and educational psychology and examines the classroom social processes that contribute to school success in elementary school. My first line of research considers characteristics of the transition to kindergarten, examines issues of "goodness of fit" between teacher and child characteristics, and evaluates attributes of family-school interactions during this transition period. My second line of research examines the effectiveness of a developmentally-informed classroom intervention, the *Responsive Classroom* Approach for enhancing teachers' ability to teach and children's social and academic growth. This work, in particular, considers the usefulness of this approach in populations "at for school failure and has implications for practice and policy. Currently, I have grants under review (Carnegie, NSF) furthering both of these lines of research.

Appointments:

2000-present	Assistant Professor of Education, University of Virginia, VA
1996-2000	Research Faculty, Curry School of Education, University of Virginia, Charlottesville, VA
1991-1996	Research Assistant, Department of Psychology, Harvard University

Education:	University of Wisconsin	Psychology	B.S. 1990
	Harvard University	Developmental Psychology	A.M. 1993
	Harvard University	Developmental Psychology	Ph.D. 1996

Selected Publications:

Rimm-Kaufman, S. E., & Sawyer, B. E. (2004). Primary-grade teachers' self-efficacy beliefs, attitudes toward teaching, and discipline and teaching practice priorities in relation to the Responsive Classroom Approach. *Elementary School Journal, 104*(4) 321-341.

Rimm-Kaufman, S. E., Vorhees, M. D., Snell, M. E., & La Paro, K. M. (2003). Guiding pre-service teachers' relationships with children: A program to facilitate responsive teacher-child interactions. *Topics in Early Childhood Special Education, 23*(3), 151-162

Rimm-Kaufman, S. E., Pianta, R. C., Cox, M. & Bradley, R. (2003). Teacher-rated family involvement and children's social and academic outcomes in kindergarten. *Early Education and Development, 14(2),* 179-198.

Morrison, E., Rimm-Kaufman, S. E., & Pianta, R. C. (2003). Mother-child interactions and school outcomes: A follow-up study. *Journal of School Psychology, 41*, 185-200.

Selected Publications, cont'd.:

Sbarra, D., Rimm-Kaufman, S. E., & Pianta, R. C. (2002). The behavioral and emotional correlates of epilepsy in adolescence: A seven year longitudinal study. *Epilepsy and Behavior, 3(4),* 355-377.

Early, D. M., Rimm-Kaufman, S. E., Cox, M. J., Saluja, G., Pianta, R. C., Bradley, R. H., & Payne, C. C. (2002). Maternal sensitivity and child wariness in the transition to kindergarten. *Parenting: Science and Practice, 2*(4), 355-377.

Rimm-Kaufman, S. E., Early, D., Cox, M., Saluja, G., Pianta, R., Bradley, R. & Payne, C. (2002). Early behavioral attributes and teachers' sensitivity as predictors of competent behavior in the kindergarten classroom. *Journal of Applied Developmental Psychology, 23*, 451-470.

Pianta, R. C, Kraft-Sayre, M., Rimm-Kaufman, S. E., Gercke, N. & Higgins, T. (2001). Collaboration in building partnerships between families and schools: The National Center for Early Development and Learning's kindergarten transition intervention. *Early Childhood Research Quarterly, 16,* 117-132.

Rimm-Kaufman, S. E., & Pianta, R. C. (2000). An ecological perspective on children's transition to kindergarten: A theoretical to guide empirical research. *Journal of Applied Developmental Psychology, 21(5)*, 491-511.

Rimm-Kaufman, S. E. Pianta, R., & Cox, M. (2000). Teachers' judgments of success in the transition to kindergarten. *Early Childhood Research Quarterly, 15(2),* 147-166.

Rimm-Kaufman, S. E. & Pianta, R. C. (1999). Patterns of family-school contact in preschool and kindergarten. *School Psychology Review, 28(3)*, 426-438.

Pianta, R. C. Rimm-Kaufman, S. E. & Cox, M. J. (1999). An ecological approach to conceptualizing the transition to kindergarten. In R. C. Pianta & M. J. Cox (Eds.), *The Transition to Kindergarten: Research, Policy, Training and Practice* (pp.3-12). Baltimore MD: Paul Brooks Publishers.

Rim-Kaufman, S. E., Kagan, J., & Byers, H. (1999). The effectiveness of adult tutoring on reading among "at risk" first grade children. *Reading Research and Instruction, 38(2),* 143-152.

Schneider, M., Clarke, A. S., Kraemer, G. W., Roughton, E. C., Lubach, G. R., Rimm-Kaufman, S. E., Schmidt, D., & Ebert, M. (1998). Prenatal stress alters brain biogenic amine levels in primates. *Development and Psychopathology, 10(3),* 427-440.

Rimm-Kaufman, S. E. & Kagan, J. (1996). The psychological significance of changes in skin temperature. *Motivation and Emotion, 20*, 63-78.

Selected Publications, cont'd.:

Kagan, J., D., Snidman, N., Peterson, E., Steinberg, D., & Rimm-Kaufman, S.E. (1995). Asymmetry of finger temperature and early behavior. *Developmental Psychobiology, 28(8), 443-451.*

Kagan, J., Arcus, D., Snidman, N., & Rimm, S. (1995). Asymmetry of forehead temperature and cardiac activity. *Neuropsychology, 9*, 1-5,

Guest Editorial Review: Child Development, Developmental Psychology, Early Education and Development, Human Development, School Psychology Review

Editorial Board: Early Childhood Research Quarterly, Journal of School Psychology

Selected Grants:

2003 Principal Investigator for grant for $10,000; Teachers for a New Era, Carnegie Corporation, 12/03 -1 2/04.
2000 Principal Investigator for grant for $200,000 from Northeast Foundation for Children; 1/01-7/04.

Mentorship and Advising: Advisor for three graduated doctoral students, six graduated masters students, four doctoral students (currently enrolled), and one masters student (currently enrolled). Served or currently serving on 18 doctoral committees in Elementary Education, Special Education, Reading Research, Psychology, Educational Psychology, and School and Clinical Psychology.

Other biosketches omitted.

PLEASE NOTE:

Fill in the blocks for new 2-year or 4-year trainees; changes to information in these blocks will affect the detailed financial information in the "Year" and "Summary" spreadsheets. Blocks that show continuing or total trainees will auto-calculate and SHOULD NOT BE TOUCHED. The total project costs per year come from the Summary page; a change to the # of trainees will be reflected in these totals.

	Year 1	Year 2	Year 3	Year 4	Year 5	*No-cost extension* Year 6	Total
New 2-year trainees	8	5	3	3	3	0	22
Continuing 2-year trainees	0	8	5	3	3	3	
Total 2-year trainees in the program in a given year	8	13	8	6	6	3	
New 4-year trainees	3	4	5	0	0	0	12
Continuing 4-year trainees	0	3	7	12	9	5	
Total 4-year trainees in the program in a given year	3	7	12	12	9	5	
TOTAL TRAINEES IN EACH YEAR	11	20	20	18	15	8	

Project Director Salary limited to no more than 2 months/year, which = about 17% effort
Curriculum development faculty: no more than 5 months total; split between Co-directors
New faculty: no more than 50%/year.

TOTAL PROJECT COSTS PER EACH YEAR:	**944,901**	**999,584**	**999,796**	**836,883**	**955,899**		
Total # of Trainees over life of the project:	34						
Cost per trainee over life of the project:	139,325						
Total budget over 5 years:	4,737,063						
Maximum allowable budget	5,000,000						

PI:	**Bob Pianta**						
Sponsor:	**Dept. of Education: IES**						
Project:	**Interdisciplinary Program in Risk Prevention**						
Dates:	**9/1/04 - 8/31/09**						
		Type	**Annual**	**%**	**Salary**	**Fringe**	**Total**
Personnel	**Role**	**Appt.**	**Salary**	**Effort**	**Support**	**Benefits**	**Support**
Pianta, Bob	Project Director	12	(b)(6)	17%	(b)(6)		(b)(6)
Justice, Laura	Co-Director	12		21%			
Rimm-Kaufmann	Co-Director	12		21%			
To be named	New faculty member	12		0%			0
To be named	Short-term visiting faculty						6,000
To be named	Program Coordinator	12	(b)(6)	50%	(b)(6)		(b)(6)
					(b)(6)		
Travel *(includes trainees in extended Year 6)*		*Regis.*	*Transportation*	*Meals*	*Lodging*	*Subtotal*	35,393
Program Director to 2-day kickoff meeting in Washington		0	75	184	450	709	
Fellows to one two-day meeting in Washington			1,433	2,451	2,850	6,734	
(232 miles @ .325/mile; meals @ $43/day; lodging shared @ $150/night)							
Fellows to one research conference per year (4day/3night)		4,750	7,600	2,584	5,016	19,950	
(registration $250; travel $400; meals @ $34/day; lodging @ $88/night)							
Visiting faculty travel						4,000	
Recruitment travel						4,000	
Equipment							0
						0	
						0	
Supplies				*$ each*	*Quantity*	*Subtotal*	1,000
Production of curricular materials				1,000	1	1,000	
						0	
Contractual							0
						0	
						0	
Other			*# trainees*		*$/trainee*	*Subtotal*	226,500
Cost of Education Allowance *(includes trainees in extended Year 6)*			19		10,500	199,500	
Routine research expenses						25,000	
Recruitment expense *(advertising, postage)*						2,000	
Subtotal Direct							361,908
F&A *8% of direct, less education allowance*							12,993
Training Stipends			*#trainees*		*$/trainee*	*Subtotal*	570,000
Two-year Trainees			8		30,000	240,000	
Four-year Trainees			3		30,000	90,000	
Second year of stipend for two-year trainees admitted in Year 5			3		30,000	90,000	
Fourth year of stipend for four-year trainees admitted in Year 3			5		30,000	150,000	
Total Project Cost							**944,901**

Year 1

PI:	**Bob Pianta**						
Sponsor:	**Dept. of Education: IES**						
Project:	**Interdisciplinary Program in Risk Prevention**						
Dates:	**9/1/04 - 8/31/09**						
		Type	**Annual**	**%**	**Salary**	**Fringe**	**Total**
Personnel	**Role**	**Appt.**	**Salary**	**Effort**	**Support**	**Benefits**	**Support**
Pianta, Bob	Project Director	12	(b)(6)	17%	(b)(6)		(b)(6)
Justice, Laura	Co-Director	12		0%			0
Rimm-Kaufmann	Co-Director	12		0%			0
To be named	New faculty member	12	(b)(6)	50%	(b)(6)		(b)(6)
To be named	Short-term visiting faculty						6,000
To be named	Program Coordinator	12	(b)(6)	50%	(b)(6)		(b)(6)
					(b)(6)		
Travel		*Regis.*	*Transportation*	*Meals*	*Lodging*	*Subtotal*	35,977
Program Director to two-day meeting in Washington		0	75	184	450	709	
Fellows to one two-day meeting in Washington			1,508	2,760	3,000	7,268	
(232 miles @ .325/mile; meals @ $43/day; lodging shared @ $150/night)							
Fellows to one research conference per year		5,000	8,000	2,720	5,280	21,000	
(registration $250; travel $400; meals @ $34/day; lodging @ $88/night)							
Visiting faculty travel expenses						4,000	
Recruitment travel						3,000	
Equipment							0
						0	
						0	
Supplies				*$ each*	*Quantity*	*Subtotal*	1,000
Production of curricular materials				1,000	1	1,000	
						0	
Contractual							0
						0	
						0	
Other			*# trainees*		*$/trainee*	*Subtotal*	236,000
Cost of Education Allowance			20		10,500	210,000	
Routine research expenses			1		25,000	25,000	
Recruitment expense (adv., postage)						1,000	
Subtotal Direct							385,541
F&A	*8% of direct, less education allowance*						14,043
Training Stipends			*#trainees*		*$/trainee*	*Subtotal*	600,000
Two-year Trainees			13		30,000	390,000	
Four-year Trainees			7		30,000	210,000	
Total Project Cost							**999,584**

PI:	**Bob Pianta**						
Sponsor:	**Dept. of Education: IES**						
Project:	**Interdisciplinary Program in Risk Prevention**						
Dates:	**9/1/04 - 8/31/09**						
		Type	**Annual**	**%**	**Salary**	**Fringe**	**Total**
Personnel	**Role**	**Appt.**	**Salary**	**Effort**	**Support**	**Benefits**	**Support**
Pianta, Bob	Project Director	12	(b)(6)	17%	(b)(6)		(b)(6)
Justice, Laura	Co-Director	12		0%			0
Rimm-Kaufmann	Co-Director	12		0%			0
To be named	New faculty member	12	(b)(6)	50%	(b)(6)		(b)(6)
To be named	Short-term visiting faculty						6,000
To be named	Program Coordinator	12	(b)(6)	50%	(b)(6)		(b)(6)
					(b)(6)		
Travel		*Regis.*	*Transportation*	*Meals*	*Lodging*	*Subtotal*	33,977
Program Director to two-day meeting in Washington		0	75	184	450	709	
Fellows to one two-day meeting in Washington			1,508	2,760	3,000	7,268	
(232 miles @ .325/mile; meals @ $43/day; lodging shared @ $150/night)							
Fellows to one research conference per year		5,000	8,000	2,720	5,280	21,000	
(registration $250; travel $400; meals @ $34/day; lodging @ $88/night)							
Visiting faculty travel expenses						4,000	
Recruitment travel						1,000	
Equipment							0
						0	
						0	
Supplies				*$ each*	*Quantity*	*Subtotal*	500
Production of curricular materials				500	1	500	
						0	
Contractual							0
						0	
						0	
Other			*# trainees*		*$/trainee*	*Subtotal*	235,500
Cost of Education Allowance			20		10,500	210,000	
Routine research expenses			1		25,000	25,000	
Recruitment expense (adv., postage)						500	
Subtotal Direct							385,737
F&A	*8% of direct, less education allowance*						14,059
Training Stipends			*#trainees*		*$/trainee*	*Subtotal*	600,000
Two-year Trainees			8		30,000	240,000	
Four-year Trainees			12		30,000	360,000	
Total Project Cost							**999,796**
Year 3							

PI:	**Bob Pianta**						
Sponsor:	**Dept. of Education: IES**						
Project:	**Interdisciplinary Program in Risk Prevention**						
Dates:	**9/1/04 - 8/31/09**						
		Type	**Annual**	**%**	**Salary**	**Fringe**	**Total**
Personnel	**Role**	**Appt.**	**Salary**	**Effort**	**Support**	**Benefits**	**Support**
Pianta, Bob	Project Director	12	(b)(6)	17%	(b)(6)		(b)(6)
Justice, Laura	Co-Director	12		0%			0
Rimm-Kaufmann	Co-Director	12		0%			0
To be named	New faculty member	12	(b)(6)	50%	(b)(6)		(b)(6)
To be named	Short-term visiting faculty						8,000
To be named	Program Coordinator	12	(b)(6)	50%	(b)(6)		(b)(6)
					(b)(6)		
Travel		*Regis.*	*Transportation*	*Meals*	*Lodging*	*Subtotal*	35,672
Program Director to two-day meeting in Washington			78	190	464	731	
Fellows to one two-day meeting in Washington			1,357	2,484	2,700	6,541	
(232 miles @ .325/mile; meals @ $43/day; lodging shared @ $150/night)							
Fellows to one research conference per year		5,400	10,800	2,448	4,752	23,400	
(registration $300; travel $600; meals @ $34/day; lodging @ $88/night)							
Visiting faculty travel expenses						5,000	
Recruitment travel						0	
Equipment							0
						0	
						0	
Supplies				*$ each*	*Quantity*	*Subtotal*	1,000
Production of curricular materials				1,000	1	1,000	
						0	
Contractual							0
						0	
						0	
Other			*# trainees*		*$/trainee*	*Subtotal*	214,500
Cost of Education Allowance			18		10,500	189,000	
Routine research expenses			1		25,000	25,000	
Recruitment expense (adv., postage)						500	
Subtotal Direct							372,225
F&A	*8% of direct, less education allowance*						14,658
Training Stipends			*#trainees*		*$/trainee*	*Subtotal*	540,000
Two-year Trainees			6		30,000	180,000	
Four-year Trainees			12		30,000	360,000	
Total Project Cost							**926,883**

PI:	**Bob Pianta**						
Sponsor:	**Dept. of Education: IES**						
Project:	**Interdisciplinary Program in Risk Prevention**						
Dates:	**9/1/04 - 8/31/09**						
		Type	**Annual**	**%**	**Salary**	**Fringe**	**Total**
Personnel	**Role**	**Appt.**	**Salary**	**Effort**	**Support**	**Benefits**	**Support**
Pianta, Bob	Project Director	12	(b)(6)	33%	(b)(6)		(b)(6)
Justice, Laura	Co-Director	12		0%			0
Rimm-Kaufmann	Co-Director	12		0%			0
To be named	New faculty member	12		100%			104,926
To be named	Short-term visiting faculty						8,000
To be named	Program Coordinator	12		100%			69,748
					(b)(6)		(b)(6)
Travel		*Regis.*	*Transportation*	*Meals*	*Lodging*	*Subtotal*	30,703
Program Director to two-day meeting in Washington		0	80	195	477	752	
Fellows to one two-day meeting in Washington			1,131	2,070	2,250	5,451	
(232 miles @ .325/mile; meals @ $43/day; lodging shared @ $150/night)							
Fellows to one research conference per year		4,500	9,000	2,040	3,960	19,500	
(registration $300; travel $600; meals @ $34/day; lodging @ $88/night)							
Visiting faculty travel expenses						5,000	
Recruitment travel						0	
Equipment							0
						0	
						0	
Supplies				*$ each*	*Quantity*	*Subtotal*	1,000
Production of curricular materials				1,000	1	1,000	
						0	
Contractual							0
						0	
						0	
Other			*# trainees*		*$/trainee*	*Subtotal*	207,500
Cost of Education Allowance (tuition, health insurance, fees)			15		10,500	157,500	
Routine research expenses for Years 5 and 6						50,000	
						0	
Subtotal Direct							480,092
F&A	*8% of direct, less education allowance*						25,807
Training Stipends			*#trainees*		*$/trainee*	*Subtotal*	450,000
Two-year Trainees			6		30,000	180,000	
Four-year Trainees			9		30,000	270,000	
Total Project Cost							**955,899**

Year 5

PI: Bob Pianta
Sponsor: Dept. of Education: IES
Project: Interdisciplinary Program in Risk Prevention
Dates: 9/1/04 - 8/31/09

Detailed Summary	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Salaries						*$ 549,899*
Pianta, Bob (Year 6 budgeted in Year 5)	0	0	0	0	0	
Justice, Laura	0	0	0	0	0	
Rimm-Kaufmann, Sara	0	0	0	0	0	
To be named, new faculty member (Year 6 budgeted in Year 5)	0	0	0	0	0	
To be named, short-term visiting faculty	0	0	0	0	0	
To be named, program coordinator (Year 6 budgeted in Year 5)	0	0	0	0	0	
Fringe Benefits	19,937	22,638	23,317	24,016	49,474	*139,381*
Subtotal	99,015	112,563	115,760	121,053	240,889	*689,280*
Travel						*171,723*
Program Director to 2-day meeting in Washington	709	709	709	731	752	
Fellows to one two-day meeting in Washington	6,734	7,268	7,268	6,541	5,451	
Fellows to one research conference per year	19,950	21,000	21,000	23,400	19,500	
Visiting faculty travel	4,000	4,000	4,000	5,000	5,000	
Recruitment travel	4,000	3,000	1,000	0	0	
Supplies						*4,500*
Production of curricular materials	1,000	1,000	500	1,000	1,000	
Other						*1,120,000*
Cost of Education Allowance ($10,500/trainee/year)	199,500	210,000	210,000	189,000	157,500	
Routine research expenses ($25,000/year; two years in Year 5)	25,000	25,000	25,000	25,000	50,000	
Recruitment expense (adv., postage)	2,000	1,000	500	500	0	
Subtotal Direct	361,908	385,541	385,737	372,225	480,092	*$ 1,985,502*
Indirect	12,993	14,043	14,059	14,658	25,807	*81,560*
Training Stipends						*2,670,000*
Two-year Trainees	240,000	390,000	240,000	180,000	180,000	
Four-year Trainees	90,000	210,000	360,000	270,000	270,000	
Second year of stipend for two-year trainees admitted in Year 5	90,000	0	0	0	0	
Fourth year of stipend for four-year trainees admitted in Year 3	150,000	0	0	0	0	
Total Costs	944,901	999,584	999,796	836,883	955,899	*$ 4,737,063*

Number of Trainees Each Year	Year 1	Year 2	Year 3	Year 4	Year 5	*No-cost extension* Year 6	Total
New 2-year trainees	8	5	3	3	3	0	22
Continuing 2-year trainees	0	8	5	3	3	3	
Total 2-year trainees in the program in a given year	8	13	8	6	6	3	
New 4-year trainees	3	4	5	0	0	0	12
Continuing 4-year trainees	0	3	7	12	9	5	
Total 4-year trainees in the program in a given year	3	7	12	12	9	5	
TOTAL TRAINEES IN EACH YEAR	11	20	20	18	15	8	

Category Summary							
Salaries	79,079	89,925	92,443	97,036	191,415		549,899
Fringe Benefits	19,937	22,638	23,317	24,016	49,474		139,381
Travel	35,393	35,977	33,977	35,672	30,703		171,723
Supplies	1,000	1,000	500	1,000	1,000		4,500
Other	226,500	236,000	235,500	214,500	207,500		1,120,000
Training Stipends	570,000	600,000	600,000	450,000	450,000		2,670,000
Total Direct Cost	931,909	985,540	985,737	822,224	930,092		4,655,503
Calculation of MTDC	931,908	985,541	985,737	822,225	930,092		4,655,502
Less: Stipends	(570,000)	(600,000)	(600,000)	(450,000)	(450,000)		(2,670,000)
Less: Tuition and Fees	(199,500)	(210,000)	(210,000)	(189,000)	(157,500)		(966,000)
MTDC Base	162,408	175,541	175,737	183,225	322,592		1,019,502
F&A @ 8%	12,993	14,043	14,059	14,658	25,807		81,560
Total Project Cost	944,901	999,583	999,796	836,882	955,899		4,737,063

Budget Narrative

Statement of Concept

Consistent with conversations with Dr. James Griffin, the IES Program Officer for CFDA 84.305, we anticipate requesting a no-cost extension for a sixth year, allowing us to complete training cycles for all the trainees proposed in this project. More specifically, in order to extend funding for eight Fellows into the sixth year, we anticipate requesting a no cost extension. In budgeting for this plan within the five-year budget framework for this CFDA, we have placed expenses of the sixth year budget in years 1-5, as described below. This budgeting allows us to remain under the total five-year cap of 5 million dollars while maximizing the number of trainees we can graduate.

Personnel/Salaries

For faculty salaries, rates are adjusted annually at +.03 for cost of living increase.

Project Director. Robert Pianta, Ph.D., will dedicate .17 FTE in all years of this project as Project Director, roughly equivalent to two months of salary support per year. Dr. Pianta's responsibilities include program direction and management. Pianta will be responsible for all aspects of the program's operation, including oversight of recruitment, admission, retention, supervision of the Program Coordinator, coordination with affiliated faculty, evaluation of the program and trainees, and quality of training. The funds requested in Year 5 will cover this expense in both Years 5 and Year 6.

On-Site Faculty Support. Sara Rimm-Kaufman, Ph.D. and Laura Justice, Ph.D., the Co-Directors, will commit .21 FTE in Year 1 only for curriculum development for courses including the Proseminar, Conceptualizations and Theory in Risk and Prevention, Research Design in Education Sciences, Research Methods in Risk and Prevention, and one additional specialty class that each will teach. These courses are foundational to the proposed program, and the course development activities to be undertaken by Rimm-Kaufman and Justice build upon course development already underway within the Curry Risk and Prevention Initiative and link with courses being taught by affiliated faculty in other departments (e.g. Repucci in Psychology).

New Faculty Member. One new faculty member at the Associate level specializing in policy issues in education sciences, with a specific interest in risk and prevention, will be recruited in Year 1. This faculty member (to be named) will be

recruited in Year 1 to begin in Year 2 and commit .50 FTE in years 2 through 6. Funds requested for year 5 will cover salary in year 6. Because this hire is consistent with the Curry strategic plan and related University priorities (see letters from Provost Block and Dean Breneman), costs related to the .50FTE of this position not funded by the proposed project will be covered by Curry resources (see letter from Breneman notes support for faculty time) and/or grant-related funds from that faculty member's sponsored projects. Every effort will be made to recruit a new hire from an underrepresented group, and the University makes available funds to offset faculty salary for those groups.

Visiting Faculty. Each year, one faculty member (in Education, Social Sciences or a related field) will be invited as short term visiting faculty (1 month) to enhance the breadth and quality of the training program. During years 3 and 5, this faculty member will be hired to visit and coordinate the summative evaluation. We have budgeted for approximately one-month salary at the Associate Professor level to provide for this consultation.

Program Coordinator. A half-time Program Coordinator (to be named) will be hired for the duration of the five-year grant period to provide logistical and clerical support to the program. The Program Coordinator will work closely with the Program Director to manage communication, recruitment, admission, and student monitoring. The Program Coordinator will also provide administrative support for course development and proseminar scheduling and speaker travel/itinerary. The funds requested for Year 5 will meet this expense in the Years 5 and 6.

Personnel/Fringe Benefits

Faculty/Staff. Fringe benefits are calculated at .243 for faculty and .337 for the project coordinator as per University of Virginia policy. Funds requested in the fifth year will also meet expenses in Year 6.

Travel

All travel expenditures will be conducted according to University and state guidelines regarding rates for lodging, meals, registration fees, and incidentals.

Project Planning Meetings. Annual project meetings with IES will be attended by the Program Director in Washington DC in all years. Funds are also requested to cover Fellows' travel to annual meetings in Washington DC with other grantees and

Institute staff. Budgeted costs reflect actual travel costs between UVA and Washington DC and are calculated based on the number of trainees per year in the program.

Professional Conferences for Training and Dissemination. Funds are requested annually for Fellows to attend professional workshops and conferences on topics associated with education science pertaining to the question(s) on which they are conducting their research. Workshops and conferences will provide opportunities for advanced training, development of collaborative networks, and dissemination of research results. Any travel funds remaining from Years 1-5 will be used for Year 6. Travel costs are budgeted on the basis of the number of trainees in a given year multiplied by a constant travel expense amount in a given year (e.g. approx. $1800 in Year 1). The travel expense allotment varies somewhat from year to year.

Visiting Faculty Travel. Funds are requested for short term visiting faculty to deliver colloquia and meet to foster professional interactions among Fellows. During Year 3 and Year 5, the visiting faculty member will be selected to conduct an evaluation assessment of the training program. Travel costs reflect estimates for airfare, lodging, and meals for a 3-4 day trip to UVA.

Recruitment Travel. Funds are requested to offset expenses related to the recruitment of Fellows in years 1 through 3. These funds will be used specifically to recruit women, underrepresented minorities, and persons with disabilities. Funds will be used to support travel for these recruits to UVA for recruitment interviews and informational visits and for the Program Director, Co-Directors, and Affiliated faculty to travel to conferences or institutions for the specific purpose of recruiting applicants from underrepresented groups. We have used this method before in our work in other graduate training programs and found it to greatly increase the number of such applicants and the likelihood they choose to attend UVA and complete training.

Supplies

Production of Curricular Materials. Funds ($500-$1000) are requested each year to cover photocopying and production of curricular materials.

Other

Tuition Remission/Cost of Education Allowance. A total of $10,500 will be provided per the RFP for tuition support to each doctoral fellow to defray the cost of

tuition, health insurance, and normal fees. Funds are requested in year 1 to cover the eight trainees in year 6.

Routine Research Expenses. As per the RFP, an annual allowance of $25,000 is requested to provide support to the fellows' research activities, to include covering assessment and intervention materials (e.g., tests), audio-visual equipment for data collection (e.g., video camera), field travel, and participant incidentals. This total amount of $25,000 will be distributed across the entire cohort of Fellows in each year. Year 5 funds for this purpose are included in the Year 6 budget.

Recruitment Materials and Expenses. Funds are requested to cover advertising, printing and mailing of recruitment materials for years 1 through 4. Costs are highest in Year 1 and trend downward through Year 4.

Training Stipends

Doctoral-Level Graduate Research Fellow Training Stipends. Fellows will receive a research $30,000 fellowship each year of enrollment, as per the amounts allotted in the RFP. We anticipate four-year duration for 4-Year Fellows with a maximum of five years of funding and two-year duration for 2-Year Fellows with a three year maximum. Fellows are required to commit 20 hours per week to research activities. The annual stipend is $30,000 ($23,000 for academic year, $7,000 for summer). A full time complement of Fellows will be recruited. See the table below for projected recruitment schedule. We have requested funds in Year 1 to cover Fellows admitted in Year 1 as well as the second year of stipends for two-year Fellows admitted in Year 5 and the fourth year of stipend for four-year Fellows admitted in Year 3.

						No-cost extension
	Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
New 2-year trainees	8	5	3	3	3	0
Continuing 2-year trainees	0	8	5	3	3	3
Total 2-year trainees in the program in a given year	8	13	8	6	6	3
New 4-year trainees	3	4	5	0	0	0
Continuing 4-year trainees	0	3	7	12	9	5
Total 4-year trainees in the program in a given year	3	7	12	12	9	5
TOTAL TRAINEES IN EACH YEAR	11	20	20	18	15	8

Appendix A
University of Virginia
Average Time-to-Degree for Doctoral Degree Recipients

	2001-02		2002-03		2003-04		3-Year Total	
	# Degrees Awarded	Mean Time to Degree (yrs)	# Degrees Awarded	Mean Time to Degree (yrs)	# Degrees Awarded	Mean Time to Degree (yrs)	# Degrees Awarded	Mean Time to Degree (yrs)
mics	11	6.64	5	5.90	7	6.43	23	6.42
ology	9	5.61	7	6.21	14	6.39	30	6.11
ogy	6	6.83	2	7.25	4	5.25	12	6.37
tion	88	4.56	111	4.12	92	4.69	291	4.69

Graduation Rates of Entering Doctoral Students

	Entered in Fall, 1995		Entered in Fall 1996		Entered in Fall 1997		Entered in Fall 1998	
	Number Entered	% Graduated in 8 Years	Number Entered	% Graduated in 7 Years	Number Entered	% Graduated in 6 Years	Number Entered	% Graduated in 5 Years
mics	21	33%	17	35%	18	11%	18	11%
ology	10	70%	9	56%	21	24%	18	6%
ogy	6	83%	2	100%	3	0%	7	0%
tion	61	80%	63	78%	61	64%	53	62%

Doctoral Program Admission Data

ology, mics, and ogy	2001						2002						2003					
	Applied			Enrolled			Applied			Enrolled			Applied			Enrolled		
		Mean GRE			Mean GRE			Mean GRE			Mean GRE			Mean GRE			Mean GRE	
	Count	Verb	Quant	Count	Verb	Quant	Count	Verb	Quant	Count	Verb	Quant	Count	Verb	Quant	Count	Verb	Quant
	798	569	684	55	559	714	833	577	691	45	563	709	872	575	705	72	603	747
merican	347	573	651	21	575	700	284	567	649	11	586	734	244	572	673	20	629	729
American	35	457	558	1	560	610	34	525	573	3	583	457	25	490	562			
merican	15	537	647				23	561	701	3	603	720	10	583	730	3	553	740
American	6	550	617				1	520	420				1	610	630			
ic American	22	525	602	1	430	510	19	518	662	2	555	660	12	597	672	1	660	760
	304	582	768	24	538	766	316	599	773	17	490	791	365	580	770	32	572	777
	495	572	661	27	577	683	527	574	673	19	582	687	503	574	678	28	606	744
	303	566	723	28	538	750	304	583	724	26	547	728	369	575	745	44	601	749

ion	2001						2002						2003					
	Applied			Enrolled			Applied			Enrolled			Applied			Enrolled		
		Mean GRE			Mean GRE			Mean GRE			Mean GRE			Mean GRE			Mean GRE	
	Count	Verb	Quant	Count	Verb	Quant	Count	Verb	Quant	Count	Verb	Quant	Count	Verb	Quant	Count	Verb	Quant
	325	541	617	86	553	586	360	535	623	85	539	570	376	553	617	115	547	574
merican	158	547	580	59	566	573	175	541	587	65	548	574	209	548	582	93	557	579
American	22	432	491	9	470	558	25	441	504	5	496	538	30	475	483	10	470	466
merican	14	575	655	4	533	683	8	478	624	1			10	548	637	2	570	610
American							1											
ic American	11	513	536	3	563	530	6	463	433	1	490	400	1	430	400			
	112	558	726	9	525	702	134	555	729	9	543	650	113	591	742	7	485	678
	211	550	621	56	553	585	236	545	627	51	553	574	246	550	623	68	525	557
	114	523	609	30	553	589	124	516	615	34	519	564	130	559	606	47	577	596

Missing data are omitted. Totals may not sum to 100%.

Letters of support omitted.