

1. The title of the training program: “PIRT Program to Increase Research Capacity in Educational Science”

2. The name and institutional affiliation of the Project Director: Christopher J. Lonigan, Ph.D., Department of Psychology & Florida Center for Reading Research, Florida State University

3. A brief description of the proposed training program, highlighting its key interdisciplinary educational and research features: A variety of national reports and agencies have noted the relative dearth of graduates from schools of education who have the requisite training to mount experiments on pedagogy. A solution to this problem is to combine the research expertise of the discipline of psychology and the topical and policy expertise of the discipline of education. This is the intent of this interdisciplinary training program. Our goal for this training program is to produce graduates from the disciplines of psychology, education, communication disorders, and other disciplines who have the level of training in methodology and statistics, the level of expertise in the content of educational sciences research related to reading, the knowledge of the politics and pragmatics of research in educational settings, and a proven record of productivity to be capable of being hired and succeeding in top tier departments regardless of discipline. Thus, our goal increases the capacity of the field by increasing the number of professionals who can add findings from high quality educational research to the body of knowledge needed to allow educators and policy makers to make evidence-based decisions concerning educational practices.

The proposed training program brings together faculty and resources from multiple departments, colleges, and institutes within Florida State University, including the Departments of Psychology, Early Child and Elementary Education, Educational Psychology and Learning Systems, Educational Leadership and Policy Studies, Special Education and Vocational and Rehabilitation Services, and Communication Disorders; and the Colleges of Education and Arts and Sciences. Students across these organizational units will be united under the umbrella of the training program and will receive specialized interdisciplinary coursework, training, and research experiences in educational science with a focus on reading research; however, all fellows also will retain the identity of their home department, which will award their doctorate. The program will be housed in the Florida Center for Reading Research (FCRR), an interdisciplinary organizational unit of FSU. Currently, six faculty members are formally associated with FCRR, four from psychology and two from the College of Education. In addition, FCRR has recently recruited two new faculty members in education who will begin in the fall of 2004 and is attempting to recruit another faculty member in psychology. We expect to hire two additional faculty members in education and one additional faculty member in psychology within the next two years. When recruitment is complete, we expect to have six faculty from education and six faculty from psychology.

During the course of this 5-year grant, approximately 38 fellows, students from the Department of Psychology, the College of Education, and the Department of Communication Disorders, will be admitted to the program. Fellows will be supported for a maximum of four years; however, only students admitted in the first three years of the program ($n = 27$) will be guaranteed four years of funding from this grant. Annual evaluations of fellows and the program, as well as the

establishment of an advisory committee that will provide feedback on fellows' research projects and program objectives will ensure that fellows receive high quality training.

PIRT Program to Increase Research Capacity in Educational Science

Abstract

There is a significant need for increasing the field of education's capacity to produce high quality research on practical questions that will provide educators and policy makers with a research base to make evidence-based decisions. Reviews of the literature indicate that there are few studies in educational science that allow strong causal inferences. A variety of national reports and agencies have noted the relative dearth of graduates from schools of education who have the requisite training to mount experiments on pedagogy. Although disciplines such as psychology and economics provide stronger training in evaluation methodologies, the topics investigated by members of these disciplines are often not the ones that educators and policy makers need evaluated to make decisions. An immediate solution is available by combining the research expertise of the discipline of psychology and the topic and policy expertise of the discipline of education. This is the intent of this multidisciplinary training program. Our goal for this training program is to produce graduates from the disciplines of psychology, education, communication disorders, and other disciplines who have the level of training in methodology and statistics, the level of expertise in the content of educational sciences research related to reading, the knowledge of the politics and pragmatics of research in educational settings, and a proven record of productivity to be capable of being hired and succeeding in top tier departments regardless of discipline. Thus, our goal increases the capacity of the field by increasing the number of professionals who can add findings from high quality educational research to the body of knowledge that will allow educators and policy makers to make evidence-based decisions concerning educational practices.

The proposed training program brings together faculty and resources from multiple departments, colleges, and institutes within Florida State University, including the Departments of Psychology, Early Child and Elementary Education, Educational Psychology and Learning Systems, Educational Leadership and Policy Studies, Special Education and Vocational and Rehabilitation Services, and Communication Disorders; and the Colleges of Education and Arts and Sciences. Students across these organizational units will be united under the umbrella of the training program and will receive specialized multidisciplinary coursework, training, and research experiences in educational science with a focus on reading research; however, all fellows also will retain the identity of their home department, which will award their doctorate. The program will be housed in the Florida Center for Reading Research (FCRR), a multidisciplinary organizational unit of Florida State University. Currently, six faculty members are formally associated with the center, four from psychology and two from the College of Education. In addition, FCRR has recently recruited two new faculty members in education who will begin in the fall of 2004 and is attempting to recruit another faculty member in psychology. We expect to hire two additional faculty members in education and one additional faculty member in psychology within the next two years. When recruitment is complete, we expect to have six faculty from education and six faculty from psychology.

During the course of this 5-year grant, approximately 38 fellows, students from the Department of Psychology, the College of Education, and the Department of Communication Disorders, will be admitted to the program. Fellows will be supported for a maximum of four years; however, only students admitted in the first three years of the program ($n = 27$) will be guaranteed four years of funding from this grant. Annual evaluations of fellows and the program, as well as the establishment of an advisory committee that will provide feedback on fellows' research projects and program objectives will ensure that fellows receive high quality training.

BUDGET DETAIL, YEAR 1 (2004 - 2005)

PERSONNEL							
	NAME	Role on Project	% Effort on Project	Inst. Base Salary	Salary Requested	Fringe Benefits	Totals
1.	Christopher J. Lonigan, Ph.D. (academic year) Christopher J. Lonigan, Ph.D. (summer)	PI	15% 50%	(b)(6)	0 21,046	0 3,866	0 24,912
2.	Christopher Schatschneider, Ph.D. (academic year) Christopher Schatschneider, Ph.D. (summer)	Co-PD	15% 27%		0 6,401	0 1,176	0 7,577
3.	Joseph K Torgesen, Ph.D. (summer) Joseph K Torgesen, Ph.D. (summer)	Prog. Faculty	12% 15%		0 7,365	0 1,353	0 8,718
4.	Rick Wagner (academic year) Rick Wagner (summer)	Prog. Faculty	12% 15%		0 7,072	0 1,299	0 8,371
5.	Laura B. Hassler, Ph.D. (academic year) Laura B. Hassler, Ph.D. (summer)	Prog. Faculty	12% 23%		0 5,376	0 1,395	0 6,771
6.	Alissa Rohrig, Ph.D. (academic year) Alissa Rohrig, Ph.D. (summer)	Prog. Faculty	12% 0%		0 0	0 0	0 0
7.	Stephanie Al Otaiba, Ed.D. (academic year) Stephanie Al Otaiba, Ed.D. (summer)	Prog. Faculty	12% 0%		0 0	0 0	0 0
8.	Akihito Kamata, Ph.D. (academic year) Akihito Kamata, Ph.D. (academic year)	Prog. Faculty	12% 10%		0 1,630	0 299	0 1,929
9.	Richard Tate, Ph.D. (academic year) Richard Tate, Ph.D. (academic year)	Prog. Faculty	12% 0%		0 0	0 0	0 0
10.	Roxanne F. Hudson, Ph.D. (academic year) Roxanne F. Hudson, Ph.D. (summer)	Prog. Faculty	12% 0%		0 0	0 0	0 0
11.	Howard Goldstein, Ph.D (academic year) Howard Goldstein, Ph.D (summer)	Prog. Faculty	12% 0%		0 0	0 0	0 0
12.	Tim Lynch (academic year) Tim Lynch (summer)	Adjunt	12% 0%		8,640 0	2,225 0	10,865 0
13.	Carol M. Conner, Ph.D. (academic year) Carol M. Conner, Ph.D. (summer)	Prog. Faculty	50% 50%		27,500 9,167	8,594 1,684	36,094 10,851
14.	Project Coordinator (TBA)	Project Coordination	50%		26,000	8,318	34,318
<i>subtotals -----></i>					120,196	30,208	150,405
CONSULTANTS							
12 Colloquium Speakers (see budget justification and narrative)					36,000		
Advisory Committee					6,000		
							42,000

Year 1 Continued

TRAVEL			
	PD to Project Directors' Meeting in DC	1,400	
	Co-PD to Project Directors' Meeting in DC	1,400	
	PD to Kick-off Meeting in DC	1,400	
	Co-PD to Kick-off Meeting in DC	1,400	
	8 Fellows to Annual Meeting in DC	10,000	
	8 Fellows to one professional conference	10,800	
			26,400
EQUIPMENT			
	None		0
SUPPLIES			
	Fellow Research Expense	25,000	
	4 Computers (@ \$3,200 each)	12,800	
	Misc Office Supplies	2,500	
	Copying	500	
	Software	1,600	
			42,400
OTHER			
	Recruitment	27,000	
			27,000
FELLOW STIPENDS, TUITION, & FEES			
	Predoctoral Fellow Stipends	(18 @ \$30,000)	540,000
	Tuition for Fellows	(18 @ \$5,947.26)	107,051
	Fees and Health for Fellows	(18 @ \$2,309.35)	41,568
			688,619
TOTAL DIRECT COSTS FOR BUDGET PERIOD			976,824
INDIRECT COSTS (8.0% MTDC) FOR BUDGET PERIOD			23,056
TOTAL COSTS FOR BUDGET PERIOD			999,880

BUDGET DETAIL, YEAR 2 (2005 - 2006)

PERSONNEL							
	NAME	Role on Project	% Effort on Project	Inst. Base Salary	Salary Requested	Fringe Benefits	Totals
1.	Christopher J. Lonigan, Ph.D. (academic year) Christopher J. Lonigan, Ph.D. (summer)	PI	15% 50%	(b)(6)	0 21,677	0 3,982	0 25,659
2.	Christopher Schatschneider, Ph.D. (academic year) Christopher Schatschneider, Ph.D. (summer)	Co-PD	15% 28%		0 6,837	0 1,256	0 8,093
3.	Joseph K Torgesen, Ph.D. (summer) Joseph K Torgesen, Ph.D. (summer)	Prog. Faculty	12% 16%		0 7,881	0 1,448	0 9,329
4.	Rick Wagner (academic year) Rick Wagner (summer)	Prog. Faculty	12% 8%		0 3,784	0 695	0 4,479
5.	Laura B. Hassler, Ph.D. (academic year) Laura B. Hassler, Ph.D. (summer)	Prog. Faculty	12% 0%		0 0	0 0	0 0
6.	Alissa Rohrig, Ph.D. (academic year) Alissa Rohrig, Ph.D. (summer)	Prog. Faculty	12% 15%		0 2,787	0 512	0 3,299
7.	Stephanie Al Otaiba, Ed.D. (academic year) Stephanie Al Otaiba, Ed.D. (summer)	Prog. Faculty	12% 8%		0 1,358	0 250	0 1,608
8.	Akihito Kamata, Ph.D. (academic year) Akihito Kamata, Ph.D. (academic year)	Prog. Faculty	12% 13%		0 2,183	0 401	0 2,584
9.	Richard Tate, Ph.D. (academic year) Richard Tate, Ph.D. (academic year)	Prog. Faculty	12% 15%		0 3,193	0 587	0 3,780
10.	Roxanne F. Hudson, Ph.D. (academic year) Roxanne F. Hudson, Ph.D. (summer)	Prog. Faculty	12% 0%		0 0	0 0	0 0
11.	Howard Goldstein, Ph.D (academic year) Howard Goldstein, Ph.D (summer)	Prog. Faculty	12% 0%		0 0	0 0	0 0
12.	Tim Lynch (academic year) Tim Lynch (summer)	Adjunt	20% 0%		14,832 0	3,787 0	18,619 0
13.	Carol M. Conner, Ph.D. (academic year) Carol M. Conner, Ph.D. (summer)	Prog. Faculty	12% 0%		0 0	0 0	0 0
14.	Project Coordinator (TBA)	Project Coordination	50%		26,780	8,461	35,241
<i>subtotals -----></i>					91,312	21,378	112,690
CONSULTANTS							
14 Colloquium Speakers (see budget justification and narrative)					42,000		
Advisory Committee					6,000		
48,000							

Year 2 Continued

TRAVEL			
	PD to Project Directors' Meeting in DC	1,400	
	Co-PD to Project Directors' Meeting in DC	1,400	
	18 Fellows to Annual Meeting in DC	22,500	
	18 Fellows to one professional conference	24,300	
			49,600
EQUIPMENT			
	None		0
SUPPLIES			
	Fellow Research Expense	25,000	
	10 PCs & Printers (@\$3,200.00 each)	32,000	
	Software	4,000	
	Misc Office Supplies	2,500	
	Copying	1,000	
			64,500
OTHER			
	Recruitment	27,000	
			27,000
FELLOW STIPENDS, TUITION, & FEES			
	Predoctoral Fellow Stipends	(17 @ \$30,000)	510,000
	Tuition for Fellows	(17 @ \$6,557.43)	111,476
	Fees and Health for Fellows	(17 @ \$2,309.35)	39,259
			660,735
TOTAL DIRECT COSTS FOR BUDGET PERIOD			962,526
INDIRECT COSTS (8.0% MTDC) FOR BUDGET PERIOD			24,143
TOTAL COSTS FOR BUDGET PERIOD			986,669

BUDGET DETAIL, YEAR 3 (2006 - 2007)

PERSONNEL							
	NAME	Role on Project	% Effort on Project	Inst. Base Salary	Salary Requested	Fringe Benefits	Totals
1.	Christopher J. Lonigan, Ph.D. (academic year) Christopher J. Lonigan, Ph.D. (summer)	PI	15% 50%	(b)(6)	0 22,327	0 4,102	0 26,429
2.	Christopher Schatschneider, Ph.D. (academic year) Christopher Schatschneider, Ph.D. (summer)	Co-PD	15% 12%		0 3,018	0 554	0 3,573
3.	Joseph K Torgesen, Ph.D. (summer) Joseph K Torgesen, Ph.D. (summer)	Prog. Faculty	12% 0%		0 0	0 0	0 0
4.	Rick Wagner (academic year) Rick Wagner (summer)	Prog. Faculty	12% 0%		0 0	0 0	0 0
5.	Laura B. Hassler, Ph.D. (academic year) Laura B. Hassler, Ph.D. (summer)	Prog. Faculty	12% 0%		0 0	0 0	0 0
6.	Alissa Rohrig, Ph.D. (academic year) Alissa Rohrig, Ph.D. (summer)	Prog. Faculty	12% 0%		0 0	0 0	0 0
7.	Stephanie Al Otaiba, Ed.D. (academic year) Stephanie Al Otaiba, Ed.D. (summer)	Prog. Faculty	12% 0%		0 0	0 0	0 0
8.	Akihito Kamata, Ph.D. (academic year) Akihito Kamata, Ph.D. (academic year)	Prog. Faculty	12% 0%		0 0	0 0	0 0
9.	Richard Tate, Ph.D. (academic year) Richard Tate, Ph.D. (academic year)	Prog. Faculty	12% 0%		0 0	0 0	0 0
10.	Roxanne F. Hudson, Ph.D. (academic year) Roxanne F. Hudson, Ph.D. (summer)	Prog. Faculty	12% 0%		0 0	0 0	0 0
11.	Howard Goldstein, Ph.D (academic year) Howard Goldstein, Ph.D (summer)	Prog. Faculty	12% 0%		0 0	0 0	0 0
12.	Tim Lynch (academic year) Tim Lynch (summer)	Adjunct	12% 0%		9,166 0	2,321 0	11,487 0
13.	Carol M. Conner, Ph.D. (academic year) Carol M. Conner, Ph.D. (summer)	Prog. Faculty	12% 0%		0 0	0 0	0 0
14.	Project Coordinator (TBA)	Project Coordination	50%		27,583	8,609	36,192
<i>subtotals -----></i>					62,095	15,586	77,681
CONSULTANTS							
12 Colloquium Speakers (see budget justification and narrative)					36,000		
Advisory Committee					6,000		
							42,000

Year 3 Continued

TRAVEL			
	PD to Project Directors' Meeting in DC	1,400	
	Co-PD to Project Directors' Meeting in DC	1,400	
	27 Fellows to Annual Meeting in DC	33,750	
	27 fellows to one professional conference	36,450	
			73,000
EQUIPMENT			
	None		0
SUPPLIES			
	Fellow Research Expense	25,000	
	2 PCs & Printers (@\$3,200.00 each)	6,400	
	Software	800	
	Misc Office Expenses	2,500	
	Copying	742	
			35,442
OTHER			
	Recruitment	2,500	
			2,500
FELLOW STIPENDS, TUITION, & FEES			
	Predoctoral Fellow Stipends	(19 @ \$30,000)	570,000
	Tuition for Fellows	(19 @ \$7,213.14)	137,050
	Fees and Health for Fellows	(19 @ \$2,309.35)	43,878
			750,927
TOTAL DIRECT COSTS FOR BUDGET PERIOD			981,550
INDIRECT COSTS (8.0% MTDC) FOR BUDGET PERIOD			18,450
TOTAL COSTS FOR BUDGET PERIOD			1,000,000

BUDGET DETAIL, YEAR 4 (2007 - 2008)

PERSONNEL							
	NAME	Role on Project	% Effort on Project	Inst. Base Salary	Salary Requested	Fringe Benefits	Totals
1.	Christopher J. Lonigan, Ph.D. (academic year) Christopher J. Lonigan, Ph.D. (summer)	PI	15% 50%	(b)(6)	0 22,997	0 4,225	0 27,222
2.	Christopher Schatschneider, Ph.D. (academic year) Christopher Schatschneider, Ph.D. (summer)	Co-PD	15% 12%		0 3,109	0 571	0 3,680
3.	Joseph K Torgesen, Ph.D. (summer) Joseph K Torgesen, Ph.D. (summer)	Prog. Faculty	12% 0%		0 0	0 0	0 0
4.	Rick Wagner (academic year) Rick Wagner (summer)	Prog. Faculty	12% 0%		0 0	0 0	0 0
5.	Laura B. Hassler, Ph.D. (academic year) Laura B. Hassler, Ph.D. (summer)	Prog. Faculty	12% 0%		0 0	0 0	0 0
6.	Alissa Rohrig, Ph.D. (academic year) Alissa Rohrig, Ph.D. (summer)	Prog. Faculty	12% 0%		0 0	0 0	0 0
7.	Stephanie Al Otaiba, Ed.D. (academic year) Stephanie Al Otaiba, Ed.D. (summer)	Prog. Faculty	12% 0%		0 0	0 0	0 0
8.	Akihito Kamata, Ph.D. (academic year) Akihito Kamata, Ph.D. (academic year)	Prog. Faculty	12% 0%		0 0	0 0	0 0
9.	Richard Tate, Ph.D. (academic year) Richard Tate, Ph.D. (academic year)	Prog. Faculty	12% 0%		0 0	0 0	0 0
10.	Roxanne F. Hudson, Ph.D. (academic year) Roxanne F. Hudson, Ph.D. (summer)	Prog. Faculty	12% 0%		0 0	0 0	0 0
11.	Howard Goldstein, Ph.D (academic year) Howard Goldstein, Ph.D (summer)	Prog. Faculty	12% 0%		0 0	0 0	0 0
12.	Tim Lynch (academic year) Tim Lynch (summer)	Adjunct	12% 0%		9,441 0	2,372 0	11,813 0
13.	Carol M. Conner, Ph.D. (academic year) Carol M. Conner, Ph.D. (summer)	Prog. Faculty	12% 0%		0 0	0 0	0 0
14.	Project Coordinator (TBA)	project Coordination	50%		28,411	8,761	37,171
<i>Subtotals -----></i>					63,958	15,928	79,886
CONSULTANTS							
12 Colloquium Speakers (see budget justification and narrative)					36,000		
Advisory Committee					4,500		
							40,500

Year 4 Continued

TRAVEL			
	PD to Project Directors' Meeting in DC	1,400	
	Co-PD to Project Directors' Meeting in DC	1,400	
	PD to Research Conference	1,600	
	28 Fellows to Annual Meeting in DC	36,400	
	28 fellows to one professional conference	39,200	
			80,000
EQUIPMENT			
	None	0	0
SUPPLIES			
	Fellow Research Expense	25,000	
	Software	500	
	Misc Office Expenses	2,500	
	Copying	750	
			28,750
OTHER			
	Recruitment	2,500	2,500
FELLOW STIPENDS, TUITION, & FEES			
	Predoctoral Fellow Stipends	(19 @ \$30,000)	570,000
	Tuition for Fellows	(19 @ \$7,934.19)	150,750
	Fees and Health for Fellows	(19 @ \$1,530.70)	29,083
			749,833
TOTAL DIRECT COSTS FOR BUDGET PERIOD			981,469
INDIRECT COSTS (8.0% MTDC) FOR BUDGET PERIOD			18,531
TOTAL COSTS FOR BUDGET PERIOD			1,000,000

BUDGET DETAIL, YEAR 5 (2008 - 2009)

PERSONNEL							
	NAME	Role on Project	% Effort on Project	Inst. Base Salary	Salary Requested	Fringe Benefits	Totals
1.	Christopher J. Lonigan, Ph.D. (academic year)	PI	15%	(b)(6)	0	0	0
	Christopher J. Lonigan, Ph.D. (summer)		50%		23,687	4,351	28,038
2.	Christopher Schatschneider, Ph.D. (academic year)	Co-PD	15%		0	0	0
	Christopher Schatschneider, Ph.D. (summer)		12%		3,202	588	3,790
3.	Joseph K Torgesen, Ph.D. (summer)	Prog. Faculty	12%		0	0	0
	Joseph K Torgesen, Ph.D. (summer)		0%		0	0	0
4.	Rick Wagner (academic year)	Prog. Faculty	12%		0	0	0
	Rick Wagner (summer)		0%		0	0	0
5.	Laura B. Hassler, Ph.D. (academic year)	Prog. Faculty	12%		0	0	0
	Laura B. Hassler, Ph.D. (summer)		0%		0	0	0
6.	Alissa Rohrig, Ph.D. (academic year)	Prog. Faculty	12%		0	0	0
	Alissa Rohrig, Ph.D. (summer)		0%		0	0	0
7.	Stephanie Al Otaiba, Ed.D. (academic year)	Prog. Faculty	12%		0	0	0
	Stephanie Al Otaiba, Ed.D. (summer)		0%		0	0	0
8.	Akihito Kamata, Ph.D. (academic year)	Prog. Faculty	12%	0	0	0	
	Akihito Kamata, Ph.D. (academic year)		0%	0	0	0	
9.	Richard Tate, Ph.D. (academic year)	Prog. Faculty	12%	0	0	0	
	Richard Tate, Ph.D. (academic year)		0%	0	0	0	
10.	Roxanne F. Hudson, Ph.D. (academic year)	Prog. Faculty	12%	0	0	0	
	Roxanne F. Hudson, Ph.D. (summer)		0%	0	0	0	
11.	Howard Goldstein, Ph.D (academic year)	Prog. Faculty	12%	0	0	0	
	Howard Goldstein, Ph.D (summer)		0%	0	0	0	
12.	Tim Lynch (academic year)	Adjunt	12%	9,724	2,424	12,148	
	Tim Lynch (summer)		0%	0	0	0	
13.	Carol M. Conner, Ph.D. (academic year)	Prog. Faculty	12%	0	850	850	
	Carol M. Conner, Ph.D. (summer)		0%	0	0	0	
14.	Project Coordinator (TBA)	Project Coordination	50%	29,263	8,917	38,180	
<i>subtotals -----></i>					65,877	17,130	83,007
CONSULTANTS							
	12 Colloquium Speakers (see budget justification and narrative)				39,600		
	Advisory Committee				4,500		
							44,100

Year 5 Continued

TRAVEL			
	PD to Project Directors' Meeting in DC	1,500	
	Co-PD to Project Directors' Meeting in DC	1,500	
	PDs to Research Conference	3,200	
	20 Fellows to Annual Meeting in DC	26,000	
	20 fellows to one professional conference	28,000	
			60,200
EQUIPMENT			
	None	0	0
SUPPLIES			
	Fellow Research Expense	25,000	
	Software	500	
	Misc Office Expenses	2,500	
	Copying	750	
			28,750
OTHER			
	Recruitment	5,000	5,000
FELLOW STIPENDS, TUITION, & FEES			
	Predoctoral Fellow Stipends	(19 @ \$30,000)	570,000
	Tuition for Fellows	(19 @ \$8,727.84)	165,829
	Fees and Health for Fellows	(19 @ \$1,338.41)	25,430
			761,259
TOTAL DIRECT COSTS FOR BUDGET PERIOD			982,316
INDIRECT COSTS (8.0% MTDC) FOR BUDGET PERIOD			17,685
TOTAL COSTS FOR BUDGET PERIOD			1,000,000

Budget Justification

PERSONNEL

Christopher J. Lonigan, Ph.D., Program Director (15% effort academic year and 50% effort summer in Years 1 - 5), is a Professor of Psychology at Florida State University and the Associate Director of the Florida Center for Reading Research (FCRR). Dr. Lonigan is a clinical psychologist with expertise in applied developmental issues, early literacy, quantitative methods, preventative interventions, and longitudinal projects. Dr. Lonigan is or has been the Principal Investigator for an IES Preschool Curriculum Evaluation Project, three NICHD-funded research projects on the development of early literacy, a NSF-funded research project on preschool intervention, a DHHS-funded research on the development and promotion of early literacy in children attending Head Start, and he has been a Co-Principal Investigator on an NICHD-funded research project examining the efficacy of a preventative preschool intervention for children at risk of reading problems and the development of reading problems (the IES, NSF, DHHS and two of the NICHD projects involve RCTs of interventions or curricula). Dr. Lonigan will be responsible for the overall administration of the program, management of the program, and interactions with IES. In addition, he will co-develop several of the core classes (e.g., with Drs. Torgesen, Schatschneider, and Hassler), co-teach some of the core classes, and serve as mentor to fellows. In collaboration with Dr. Schatschneider (Co-Project Director) and the Program Coordinator, Dr. Lonigan will facilitate fellows' research activities within FCRR, conduct evaluations of fellows' progress in the program, evaluate the overall success of the training program, and consult with the Advisory Committee periodically concerning needed modifications to the program. Funds are requested to cover the costs of 50% of Dr. Lonigan's summer salary in each year of the project (6.5 weeks). In addition to the requested funds, Florida State University will contribute Dr. Lonigan's salary (15% effort) during the academic year.

Christopher Schatschneider, Ph.D., Co-Project Director (12% effort academic year in Years 1 -5, 27% effort summer Year 1, 28% effort summer Year 2, 12 percent effort summer Years 3 - 5), is an Associate Professor of Psychology at Florida State University and a Faculty Member of the Florida Center for Reading Research. Dr. Schatschneider has significant expertise in quantitative methods and research design. He has published in the area of individual differences in early reading acquisition, measurement and item response theory, and the use of hierarchical linear models in developmental research. Dr. Schatschneider has been a NICHD Principal Investigator in a research project on bilingual literacy and is currently a Co-Principal Investigator on four federal grants (two IERI-NSF and two NICHD), which focused on the development of early reading skills. Three of the four current grants involve the use of randomized trials in the research design. In collaboration with Dr. Lonigan, Dr. Schatschneider will facilitate fellows' research activities within FCRR, conduct evaluations of fellows' progress in the program, evaluate the overall success of the training program, and consult with the Advisory Committee periodically concerning needed modifications to the program. In addition he will co-develop several of the core classes (e.g., with Drs. Lonigan, Torgesen, Kamata, and Tate), co-teach some of the core classes (advanced research methods, qualitative analyses), and serve as mentor to fellows. Funds are requested to cover the costs of 12% of Dr. Schatschneider's summer salary in each year of the project (1.5 weeks) as Co-Project Director. Funds are also requested to cover 15-16% of Dr. Schatschneider's summer salary in Years 1 and 2 (~2-weeks each year) for course development. Florida State University will contribute Dr. Schatschneider's salary (15% effort) during the academic year.

Joseph K. Torgesen, Ph.D., Program Faculty (12% effort academic year in Years 1 - 5, 15/16% effort summer in Year 1 and Year 2), is the Robert M. Gagne Professor of Psychology and Education and the Director of the Florida Center for Reading Research. Dr. Torgesen is a nationally recognized expert in learning disabilities, reading, remedial interventions, and teacher professional development. Dr. Torgesen has is or has been the principal investigator on several NICHD and IES funded research projects involving randomized evaluations of interventions for struggling readers in grades 1 through 5. He was the principal engineer of Florida's Reading First Initiative, and he is the principal investigator for a U.S. Department of Education Award to provide technical assistance to Eastern States' Reading First programs. Dr. Torgesen, in collaboration with Drs. Lonigan, Wagner, and Hassler will co-develop the core content seminar for the program and the educational research policy course. He will co-teach the core content seminar and serve as mentor to fellows. Funds are requested to cover 15-16% of Dr. Torgesen's summer salary in Years 1 and 2 (~2-weeks each year) for course development. Florida State University will contribute Dr. Torgesen's salary (12% effort) during the academic year.

Richard K. Wagner, Ph.D., Program Faculty, (12% effort academic year in Years 1 - 5, 15% effort summer in Year 1, 8% effort summer in Year 2), is the Alfred Binet Professor of Psychology and Associate Director of the Florida Center for Reading Research. Dr. Wagner is a nationally recognized expert in the development and measurement of early reading skills. He has substantial expertise in research methods and quantitative methods, including measurement and item response theory, multivariate analyses, and structural equation modeling. Dr. Wagner has the principal investigator on several NICHD funded research projects involving the development of early reading skills, co-principal investigator on several NICHD funded research projects involving the evaluation of early reading interventions for struggling readers, and is principal investigator on an IES funded research project examining reading comprehension in school age children. In collaboration with Drs. Lonigan, Torgesen, Schatschneider, Al Otaiba, Roehrig, Tate, and Kamata, Dr. Wagner will co-develop the core content seminar for the program, the advanced research methods course, and the quantitative methods course. He will co-teach the core content seminar and the quantitative methods course, and serve as mentor to fellows. Funds are requested to cover 15% of Dr. Wagner's summer salary in Year 1 (~2-weeks) and 8% in Year 2 (~1-week) for course development. Florida State University will contribute Dr. Wagner's salary (12% effort) during the academic year.

Laura B. Hassler, Ph.D., Program Faculty, (12% effort academic year in Years 1 - 5, 23% effort summer in Year 1), is an Associate Professor of Educational Leadership and Policy Studies and the Director of the Learning Systems Institute (LSI), a multidisciplinary research and development unit of Florida State University focused on the improvement of teaching and learning, and on technological applications for improving effectiveness and efficiency. Dr. Hassler's experiences for 12 years as a special education teacher, 14 years as a school-based administrator--including 8 years as a school principal, and her role in LSI provide her with firsthand knowledge and expertise concerning the challenges encountered in undertaking major educational reform efforts at the classroom, school, and district level. Dr. Hassler is the principal investigator for a number of federal and state-level grants involved with the evaluation of initiatives to improve teacher quality and school quality. In addition, she oversees a variety of other educationally relevant projects in her role as Director of LSI. Dr. Hassler serves on the

boards and executive committees of numerous organizations and committees associated with the development and evaluation of educational policy in Leon County and the State of Florida. In collaboration with Drs. Lonigan, Torgesen, Schatschneider, and Roehrig, Dr. Hassler will co-develop the educational research policy course and the core content seminar for the program. She will teach educational research policy course and serve as mentor to fellows. Funds are requested to cover 23% of Dr. Hassler's summer salary in Year 1 (~3-weeks) for course development. Florida State University will contribute Dr. Hassler's salary (12% effort) during the academic year.

Alysia D. Roehrig, Ph.D., Program Faculty (12% effort academic year in Years 1 - 5, ~15% effort summer in Year 2), is an Assistant Professor of Educational Psychology and Learning Systems at Florida State University, and she is a Faculty Associate of the Florida Center for Reading Research. Dr. Roehrig is an expert in teacher quality and effective teaching practices. She currently has several on-going research projects related to improving teachers' practices in the classroom and has a grant under review at IES to evaluate the effectiveness of some of these teaching practice modifications. In collaboration with Drs. Lonigan, and Torgesen, Dr. Roehrig will help develop the core content seminar for the program and serve as mentor to fellows. Additionally, she will serve a key role to ensure that the perspective of the discipline of education is represented in all levels of training and that fellows in the College of Education participate fully in the program's training activities. Funds are requested to cover ~15% of Dr. Roehrig's summer salary in Year 2 (~2-weeks) for course development. Florida State University will contribute Dr. Roehrig's salary (12% effort) during the academic year.

Stephanie Al Otaiba, Ph.D., Program Faculty (12% effort academic year in Years 1 - 5, 8% effort summer in Year 2) is an Assistant Professor of Special Education and Vocational and Rehabilitation Services at Florida State University, and she is a Faculty Associate of the Florida Center for Reading Research. Dr. Al Otaiba has been teaching and studying children with special needs learning problems for over 20 years, and she has authored or co-authored several articles and book chapters on that subject. She is also a reviewer for Teaching Exceptional Children. She has special expertise in the early identification of children at risk for reading failure, early literacy interventions for children with disabilities, and training teachers to work with students with special needs. In collaboration with Dr. Roehrig, Dr. Al Otaiba will help facilitate the integration of the discipline of education into the core curriculum of the program. She will assist in the development of the core content seminar, particularly as it relates to students with special needs, and she will serve as a mentor to fellows. Funds are requested to cover 8% of Dr. Al Otaiba's summer salary in Year 2 (~1-week) for course development. Florida State University will contribute Dr. Al Otaiba's salary (12% effort) during the academic year.

Akihito Kamata, Ph.D., Program Faculty, (12% effort academic year in Years 1 - 5, 10% effort summer in Year 1, 15% effort in Year 2), is an Associate Professor of Educational Psychology and Learning Systems at Florida State University. Dr. Kamata is an expert in psychometrics, including Item-Response Theory and related quantitative methods. His recent work, funded by IES and the State of Florida, has examined how adaptations to tests like the NAEP and FCAT affect the performance of test items. Dr. Kamata teaches several graduate-level courses on psychometrics and quantitative methods, including measure development and IRT analyses. In collaboration with Drs. Schatschneider, Lonigan, Wagner, and Tate, Dr. Kamata will

co-develop the quantitative methods course, the advanced research methods course, and the advanced psychometrics course. He will teach or co-teach these courses and serve as a mentor to fellows. Funds are requested to cover 10% of Dr. Kamata's summer salary in Year 1 (~1.3-weeks) and 13% in Year 2 (~1.7-weeks) for course development. Florida State University will contribute Dr. Kamata's salary (12% effort) during the academic year.

Richard L. Tate, Ph.D., Program Faculty (12% effort academic year in Years 1 - 5, 15% effort summer in Year 2), is an Associate Professor of Educational Psychology and Learning Systems at Florida State University. Dr. Tate is an expert in multivariate statistics, including Hierarchical Linear Modeling and Item-Response Theory. His recent work has focused on psychometric analyses. Dr. Tate teaches several graduate-level courses on psychometrics and quantitative methods. In collaboration with Drs. Schatschneider, Lonigan, Wagner, and Tate, Dr. Tate will co-develop the quantitative methods course, the advanced research methods course, and the advanced psychometrics course. He will teach or co-teach these courses and serve as a mentor to fellows. Funds are requested to cover 15% of Dr. Tate's summer salary in Year 2 (~2-weeks) for course development. Florida State University will contribute Dr. Tate's salary (12% effort) during the academic year.

Roxanne F. Hudson, Ph.D., Program Faculty, (12% effort academic year in Years 1 - 5), is an Assistant Professor of Early Child and Elementary Education at Florida State University, and she is a Faculty Associate of the Florida Center for Reading Research. Dr. Hudson's area of interest includes remedial interventions for struggling readers as well as the development of reading skills in English Language Learners. Dr. Hudson is one of several recent hires associated with the Florida Center for Reading Research (Dr. Hudson was recruited in Spring 2004 and will start in Fall 2004) intended to increase the quality and degree of interdisciplinary collaboration in the Florida State University's College of Education. Dr. Hudson's empirical focus, expertise, and focus substantially increases the depth of high-quality research capacity in the College of Education. Dr. Hudson will mentor program fellows and help facilitate the integration of the discipline of education into the core curriculum of the program. Additionally, she will participate in the core content seminar, particularly in reference to the needs and development of English Language Learners. Florida State University will contribute Dr. Hudson's salary (12% effort) during the academic year.

Howard Goldstein, Ph.D. Program Faculty, (12% effort academic year in Years 1 - 5), is the Donald M. Baer Professor and Chair of Communication Disorders at Florida State University. Dr. Goldstein's area of expertise involves the development and evaluation of early intervention programs for children with communication disorders. Most recently, he has focused on evaluations of intervention programs for improving the language and literacy outcomes for young children with communication impairments, as well as the preparation of personnel who will work at the interface of research and policy. He has current funding from the U.S. Department of Education to evaluate the impact of various interventions for children with communication impairments. Dr. Goldstein will co-teach the core content seminar and will serve as a mentor to fellows. Florida State University will contribute Dr. Goldstein's salary (12% effort) during the academic year.

Thomas A. Lynch, Ph.D., Program Faculty, (12% effort academic year in Years 1 - 5) is the Director of the Center for Economic Forecasting and Analysis and an Adjunct Professor of Economics, Public Administration, Urban Planning at Florida State University. Dr. Lynch is an economist with expertise in the economics of educational policy and practice. In collaboration with Drs. Lonigan and Hassler, Dr. Lynch will co-develop the core content seminar and the educational research policy course. He will co-teach these classes as well as offer a seminar in the economics of education (Year 2). Dr. Lynch's participation in this program will bring an important area of expertise relevant to educational research and policy not currently represented by other program faculty. Because of the nature of Dr. Lynch's appointment at Florida State University and to allow Dr. Lynch to contribute time to the project, funds are requested to support 12% of his time during the academic year and 20% in Year 2 to cover the costs of his time to teach a seminar in the economics of education.

Carol M. Connor, Ph.D., Program Faculty, (12% effort academic year in Years 1 - 5, 50% effort in Year 1), is an Assistant Professor of Early Child and Elementary Education at Florida State University, and she is a Faculty Associate of the Florida Center for Reading Research. Dr. Connor's area of expertise includes the way in which characteristics of learners influence their responses to education and educational interventions. Additionally, her professional background and research has focused on children with special needs in educational settings, particularly children with hearing impairments. Dr. Connor is well versed in research methodology and sophisticated quantitative methods (e.g., HLM). In collaboration with Drs. Lonigan, Schatschneider, and Torgesen, Dr. Connor will help develop the core content seminar and the advanced research methods course. She will serve as mentor to fellows. Dr. Connor also will serve a key role to ensure that the perspective of the discipline of education is represented in all levels of training and that fellows from the College of Education participate fully in the program's training activities. As noted in the project narrative, Florida Center for Reading Research has and continues to recruit new faculty in the Department of Psychology and the College of Education to increase the number of faculty engaged in multidisciplinary research relevant to reading and educational sciences. Particularly in the College of Education, Florida Center for Reading Research's recruitment strategies have and will continue to increase the representation of highly qualified and empirically oriented faculty conducting high quality research. These recent and future hires will significantly enhance the overall training of students in the College of Education, leading to a substantial increase in doctoral-level graduates prepared to contribute to educational sciences during the course of their own careers. Dr. Connor is one of several recent hires associated with the Florida Center for Reading Research (Dr. Connor was recruited in Spring 2004 and will start in Fall 2004). These new hires were intended to increase the quality and degree of interdisciplinary collaboration in the Florida State University's College of Education. Dr. Connor substantially increases the depth of high-quality research capacity in the College of Education, and, given her training and expertise, she will significantly enhance the multidisciplinary capacity of the training for fellows associated with this project. Consequently, funds are requested to cover 50% of the cost of Dr. Connor's first year salary, consistent with the criteria outlined in the RFA for this program. Florida State University will contribute Dr. Connor's salary (12% effort) during the academic year in Years 2 - 5.

Project Coordinator (TBA, 50% Effort). In each year of the project, a masters- or doctoral-level associate will serve as the project coordinator. The project coordinator, directly supervised by the PD and co-PD, will be responsible for overseeing the day-to-day operation of the

program, providing coordination and liaison between the fellows and FCRR staff, maintaining records of fellows' activities and accomplishments, coordinating meetings with the Advisory Committee with Program Faculty and fellows, coordinating outside colloquium speakers, maintaining accounting records for program expenditures, serving as liaison with FCRR's executive director to solicit, coordinate, and maintain the resources needed for successful implementation of the program, and facilitating communication across all departments involved in the program. Funds are requested to support 50% of the project coordinator's calendar year salary.

Fringe Benefits. Fringe benefits are calculated at a rate of 18.37% for faculty and the project coordinator. Funds are included in fringe benefits to provide health insurance for 9-month faculty who are paid by the grant during the academic year (Dr. Conner) and all 12-month personnel for the percent of time paid by the grant. At present, the annual cost of health insurance for Florida State University employees is \$7,083.00.

Notes. Salary for all project personnel is adjusted at a rate of 3.0% per year. Because funds for faculty salary are not allowed, except for the program director and up to 5-months for course and program development, 9-month faculty are shown as having 0% effort in summer. 9-month faculty will continue to mentor fellows and engage in project-related activities during the summer months; however, their funding sources will be other grants or summer teaching assignments, which could include classes associated with this project. Other than funds requested to support course and program development, and adjunct faculty, program faculty will be supported on their regular faculty lines through Florida State University during the academic year.

CONSULTANTS (contractual)

Colloquium Speakers. As a core component of the training program, we intend to invite numerous experts in the field of educational sciences research, psychometrics, methodology, or other specific educational sciences research content areas to participate in a colloquium and seminar series in each year of the project. These outside speakers (see narrative for more details) will participate in the core content seminar in their area of expertise and present a colloquium on their most recent research activities and findings. Most significantly, we will ask these speakers to also prepare a more informal brown-bag presentation and discussion concerning the challenges that they have faced in conducting meaningful educational sciences research (e.g., the barriers encountered, the solutions to those barriers, lessons learned from their experiences). During the visit, fellows will have an opportunity to consult with these experts on questions and issues specific to the fellow's area of interest and current research projects. Finally, program faculty will get input on the program from these experts in terms of training model, direction, and fellows. Across all years of the program, we anticipate having an outside expert participate every two to three weeks during the fall and spring semester (i.e., 12 to 14 per year). Funds are requested to support this colloquium and consultation series in each year of the project. Costs are estimated at \$1,500 honorarium and \$1,500 travel (e.g., airfare @\$800; hotel @ \$175/night x 3 nights=\$525; airport parking @ \$12/day x 3 days= \$36; per diem @ \$46/day x 3 days = \$138). Travel costs are adjusted slightly in Years 4 and 5 to reflect expected cost increases.

Advisory Committee. In each year of the project, funds are requested to support the costs for the members of the project's advisory committee to meet with the Project Director and Co-Project Director, as well as program faculty, to provide input to and feedback on the program. We anticipate meeting with the Advisory Committee three to four times a year to provide them with updates on the program, allow them to review program achievements, and to solicit expert advice on current issues in educational policy. Funds are requested in each year of the project to provide a nominal honorarium of \$750 to each of the six members of the Advisory Committee.

TRAVEL

Travel for Project Directors. Funds are requested for the Project Director and Co-Project Director to attend the Project Kick-Off Meeting in Washington DC. Additionally, in each year of the project, funds are requested for the Project Director and co-Project Director to attend the project directors' meeting in Washington DC. Travel costs for these trips are estimated at approximately \$1,400 each (airfare @\$750; hotel @ \$150/night x 3 nights=\$360; airport parking @ \$10/day x 3 days= \$30; per diem @ \$46/day x 3 days = \$138; local transportation = \$50).

In Years 4 and 5, funds are requested for the Project Director and/or Co-Project Director to attend a professional conference to report on the structure, experiences, and outcomes of the training program. We believe that this secondary diffusion of effective models is required to sustain and increase the utilization of high quality research in education and to encourage and sustain programs in multiple disciplines that are designed to increase the capacity for high quality educationally relevant research through graduate training. Travel costs for these trips are estimated at approximately \$1,600 each (airfare @\$750; hotel @ \$150/night x 3 nights=\$360; airport parking @ \$10/day x 3 days= \$30; per diem @ \$46/day x 3 days = \$138; local transportation = \$50; conference registration = \$200).

Travel for Fellows. Funds are requested in each year of the project for program fellows to attend the PIRT Program Meeting in Washington DC. Funds are budgeted to reflect the expected number of fellows in the program in Year 1 (e.g., 8 fellows) through Year 5 (e.g., 20 fellows). Travel costs for these trips are estimated at approximately \$1,250 each (airfare @\$750; hotel @ \$150/night x 2 nights=\$300; airport parking @ \$10/day x 3 days= \$30; per diem @ \$46/day x 3 days = \$138; local transportation = \$32).

In each year of the program, funds are requested to support travel for program fellows to attend one professional conference (e.g., APA, AERA, IRA, SSSR). Fellows will present research findings at these conferences and will be encouraged to attend conferences outside of their primary discipline. Program faculty also will attend these conferences to provide fellows with assistance, feedback, and create opportunities for professional networking with leaders in the field of educational science; however, travel costs for program faculty will come from research grants or other funding sources. Funds are budgeted to reflect the expected number of fellows in the program in Year 1 (8 fellows) through Year 5 (20 fellows). Travel costs for these trips are estimated at approximately \$1,350 each (airfare @\$750; hotel @ \$150/night x 2 nights=\$300; airport parking @ \$10/day x 3 days= \$30; per diem @ \$46/day x 3 days = \$138; local transportation = \$32; conference registration).

Costs for travel to PIRT meetings and fellows' travel to conferences are adjusted slightly in Years 4 and 5 to reflect expected cost increases.

EQUIPMENT

None Requested

SUPPLIES

Funds are requested in all years of the project to cover the costs associated with office supplies to be used in project management activities, course work, Advisory Committee meetings, and consultative meetings with colloquium participants (\$2,500 per year). Funds are requested in all years of the project to cover the costs of office-related expenses (e.g., mailing, photocopies, long-distance: estimated @ \$500 - \$750). Funds are requested for software updates and site license costs for computer software associated with data management and data analysis (varies by year). In each year of the project, \$25,000 is requested to support fellows' research activities. These funds will be used to support local travel for data collection, purchase of needed assessments or tools for research, photocopy expenses for fellows' research, special software (or software development) needed for specific research projects, and a limited amount of time for research assistants if other funding sources cannot be secured (e.g., for pilot studies). Additional funds for fellows' research expenses will be provided by FCRR or project faculty's research grants (if fellows research activities fall within the specific aims of the research). Additionally, fellows will be supported in their attempts to secure external funding for fellow-initiated research expenses either through IES, the State of Florida, or appropriate alternative funding sources (e.g., NICHD).

Funds are requested in Year 1 to purchase 4 computer systems (i.e., CPU, monitor, printer) to support the logistics of program management for the Project Director and the Project Coordinator and to help offset the costs of supplying 8 fellows with state-of-the-art computers. In Year 1, FCRR will provide computer equipment in the form of a state-of-the-art desktop or laptop to each fellow. In Year 2, given the significant increase in the number of fellows, funds are requested to purchase an additional 10 computer systems, and in Year 3, funds are requested to purchase an additional 2 computer systems. In Years 3 and 4, there will be an anticipated 27-28 fellows in the program, each of whom will need her or his own computer system to complete program-related projects and independent research. FCRR will supply one-half (i.e., 14 computers and printers) of this equipment from its operating budget or via alternative funding. Costs for computer equipment are estimated at \$2,700 per CPU/Monitor and \$500 per printer.

OTHER

Fellow Tuition and Fees. Funds are requested to pay for fellows' tuition and fees for all years that they are supported in the program (see graduate fellow stipends below for detail regarding the funding cycle, plan of support, and plan of admissions to the program). Florida State University estimates the cost of in-state tuition for graduate students at the following rates per credit hour in each year of the project: 2004-2005 (Year 1): \$180.22, 2005-2006 (Year 2): \$198.71, 2006-2007 (Year 3): \$218.58, 2007-2008 (Year 4): \$240.43, and 2008-2009 (Year 5):

\$264.43. Funds in each year for 33 credit hours per fellow are allocated (12 credit hours in fall and spring semester, 9 credit hours in summer). Fees are estimated at the rate of \$36.95 per credit hour (i.e., $33 * \$36.95 = \1219.35 per year per fellow) and the cost of student health insurance. The number of fellows supported in each year of the project is detailed below under “graduate fellow stipends.” As with stipends (see below), funds for fellows’ tuition and fees are included in the prior year of funding for all cohorts of fellows admitted in Year 2 and beyond because the funding cycle of the grant (i.e., ~September 1 - August 31) lags behind the fiscal funding year of Florida State University (i.e., ~August 1 - July 31).

Recruitment Expenses. To ensure that we are able to admit the students with the greatest potential for success in the program and those who will be most likely to increase the capacity of future researchers working in educational sciences, funds are requested to cover the costs of recruitment expenses. It is our experience at Florida State University that a significant enhancement to our recruiting efforts is a on-site visit to the program. Typically, all potential admissions are invited to visit the program at a specific time during which they meet with current students, interview with faculty, and obtain first-hand information about the program, facilities, and local area. In our experience, invitees to this recruitment visit should occur in a minimum of a 3:1 ratio for the number of students to be admitted. Funds requested for this purpose in all years of the program include travel to Tallahassee (~\$500) and housing in Tallahassee during the visit (~\$250) per invitee. For instance we intend to admit 10 fellows to the program in Year 2. Therefore, we would want to invite a minimum of 30 applicants for an on-site visit to the program in Year 1 during graduate student recruitment (i.e., $30 * \$750 = \$22,500$). Additional recruitment costs in each year will pay for advertising in relevant professional publications, communication with undergraduate or graduate institutions that are good candidates for locating potential students for the program, particularly including institutions educating members of traditionally underrepresented groups, and possibly travel to meetings or institutions for on-site recruitment for the training program. Due to the decrease in number of fellows admitted beyond Year 3, costs associated with recruitment are substantially reduced.

GRADUATE FELLOW STIPENDS

We intend to provide up to four years of support at the IES specified rate of \$30,000 per year for each fellow admitted to the program, conditional on adequate progress in the program (see narrative). In Year 1, we intend to admit 8 fellows to the program from graduate students who have already been admitted to one of the participating departments. In Year 2, we plan to admit 10 additional fellows, specifically recruited for this program, and in Year 3, we plan to admit an additional 9 fellows to the program, specifically recruited for this program. Because of the differing home department program requirements of graduate students admitted as fellows and because fellows from different home departments enter graduate training at different points of post-bachelor education (e.g., almost all students in psychology enter with only a bachelors degree whereas all students in communication disorders enter with a masters degree), it is likely that some fellows will take less than four years to complete their degree requirements. Consequently, we will continue to admit fellows throughout the 5-year period of the grant up to the number of available funded slots each year. Because the funding cycle of the grant (i.e., ~September 1 - August 31) lags behind the fiscal funding year of Florida State University (i.e., ~August 1 - July 31) and to be able to make offers of admissions to fellows against a guaranteed

funding line for their first year, funds for fellows stipends, tuition, and fees are included in the prior year of funding for all cohorts of fellows admitted in Year 2 and beyond. For example, the funding for the 10 fellows to be admitted in Year 2 is budgeted in Year 1 so that fellows' funds are available at the start of the academic year (as well as when an offer of admission is made). Over the life of the grant, we will admit a minimum of 38 fellows to the program, with sufficient funding in the project period to provide a full four years of support for all fellows admitted in Year 1 through Year 3. We anticipate continuing the training program beyond the initial five-year period--including the last year of the 5-year funding cycle, either via a continuation of the program by IES or by seeking alternative funding in the form of a NIH training grant. Consequently, we will continue to admit fellows beyond Year 3 with the understanding that they may complete the program using alternative funding sources, like an NIH training grant, support from program faculty's research grants, departmental funding, FCRR funding, or individual NIH predoctoral awards.

INDIRECT COSTS

Indirect costs are calculated at 8% of modified total direct costs, excluding fellow stipends, tuition, and fees and equipment exceeding a \$5,000 per unit cost.

FUNDS CONTRIBUTED BY THE FLORIDA CENTER FOR READING RESEARCH

All fellows supported on this project will be housed in the Florida Center for Reading Research (FCRR), a multidisciplinary organizational unit of Florida State University. The center is housed off-campus in approximately 15,000 sq. feet of office space. FCRR will provide space for offices for all project fellows. FCRR will also provide required office furnishings, phones, and access to the campus computer network. As noted above, FCRR will provide sufficient state-of-the-art computers to over 50% of the fellows admitted to the program. Additionally, FCRR will help support fellows research expenses, as needed (and based on the availability of funds), when fellows participate in research in-line with the mission of FCRR or to support questions of interest to the Just Read! Florida Office within the State of Florida's Department of Education. FCRR will provide access to archival data like the PMRN, CMERS, and FCAT studies (see narrative), and support the work of fellows with FCRR faculty on grant-funded research.

PIRT Program to Increase Research Capacity in Educational Science

“We need evidence-based education because current practice [in education] has failed. In no other field are personal experiences relied on to make policy choices and in no other field is the research base so inadequate” (Grover “Russ” Whitehurst, quoted in the *Monitor on Psychology*, October 2003).

As suggested by the quote above, education, as a field, has not embraced science as the method of determining what works best for whom. Instead, decisions on education policy often rely on judgements of “best-practice.” In its better form, best-practice recommendations rely on the collective judgements of those with experience in a particular situation (i.e., “experts”). However, experts can be mistaken. Changes in best-practice recommendations are often dependent on factors that have little or nothing to do with evidence. Science, in contrast, provides a systematic means of testing assumptions, including those concerning educational practice. Examination of research on human judgement reveals that humans are quite fallible recorders and reporters of relationships between events (e.g., Nisbett & Ross, 1980). One problem is that we typically have a confirmatory bias. That is, we tend to look for and remember evidence that supports our beliefs. Consequently, disconfirming evidence is typically not noticed, ignored, or given less weight. Such a process tends to overlook evidence that our beliefs are incorrect. Science, on the other hand, uses systematic observations to look for disconfirming evidence. Although science is not infallible, it is explicitly self-correcting.

The identification of empirically supported educational practices represents part of a larger movement within medical, educational, and social sciences designed to increase attention to the quality of evidence used to understand, evaluate, and select interventions to remedy or prevent specific problems. The impetus for using scientific evidence to make decisions is increasing due to federal initiatives such as the No Child Left Behind Act (NCLB). Although this legislation calls for the use of “scientifically based research” in education, those charged with making such policy decisions are often faced with a critical shortage of the type of evidence needed. Cook (2001) notes that there was a relative dearth of experimental studies, the type of study required to fulfill the mandate of NCLB, funded by the US Department of Education’s Office of Research and Innovation over a 10-year period. In fact, most studies in education involve designs that are limited in the causal information they provide about the educational practice under investigation.

Why are experimental studies needed in education? Several published studies have examined the “truth value” of results obtained from quasi-experimental studies versus results from experimental studies. Although it is clear that well-designed and well-implemented quasi-experimental studies have their place in educational sciences, the results of the comparisons between quasi-experimental studies and experimental studies reveal that quasi-experimental studies provide a significantly biased estimate of the effect of the independent variable on the dependent variable (e.g., Bloom, Michaelopoulos, Hill, & Lei, 2002; Glazerman, Levy, & Myers, 2003; Lipsey & Wilson, 1993). Averaged across multiple studies, quasi-experimental designs approximate the results of experimental studies. Therefore, experimental studies are substantially more efficient than quasi-experimental studies. However, it is rarely the case that there are sufficient quasi-experimental studies on a single topic to provide the “stabilized” average. Decisions are often made on the results of a single study, and incorrect causal conclusions have costs in terms of resources, potential achievement, or worse.

Cook (2003) provided several reasons why education, as a field, has tended to reject the experiment as the gold standard of evaluation. Included in the arguments against experiments are reasons such as: They rely on an outmoded model of causation; they cannot be mounted in

schools; tradeoffs between internal and external validity; the experiments are not necessary because better alternatives exist; and experiments have been tried and failed to produce usable information. Although Cook provides compelling cases against the majority of these arguments (e.g., only three experiments involving school reform have been published), it appears that the debate comes down to a schism on the philosophy of science between education and those who prefer designs that allow strong causal conclusions. The numbers are compelling. Cook estimates that only approximately 1% of the 2,000 studies that the National Reading Panel reviewed on phonological awareness involved experiments. Cook also notes that disciplines such as psychology and economics have been responsible for many experiments conducted in schools. However, he also notes that most of these studies have either been conducted under federal contract for wide-scale implementation evaluation or have not involved pedagogic questions (e.g., school-based studies of health-related prevention programs).

If educational research is to provide evidence that allows strong causal conclusions, the culture of education researchers needs to change. Although disciplines such as psychology and economics tend to provide stronger training in evaluation methodologies, the topics investigated are often not the ones that educators and policy makers need evaluated to make evidence-based decisions. An immediate solution is available by combining the research expertise of the discipline of psychology and the topic and policy expertise of the discipline of education. This is the intent of this interdisciplinary training program. Our goal for this training program is to produce graduates from the disciplines of psychology, education, communication disorders, and other disciplines who have the level of training in methodology and statistics, the level of expertise in the content of educational sciences research related to reading, the knowledge of the politics and pragmatics of research in educational settings, and a proven record of productivity to be capable of being hired and succeeding in top tier departments regardless of discipline. Thus, our goal increases the capacity of the field by increasing the number of professionals who can add findings from high quality educational research to the body of knowledge needed to allow educators and policy makers to make evidence-based decisions concerning educational practices.

DESCRIPTION OF PROPOSED TRAINING PROGRAM

At present, graduate students at Florida State University (FSU) who are interested in research related to education receive relatively isolated training in their respective home departments. Although some informal collaborations between faculty across departments and disciplines exist (e.g., Lonigan has worked with students and faculty in Communication Disorders and Torgesen has worked with students in Education), there is currently no formal mechanism in place that allows students to take advantage of the significant faculty expertise and program resources that exist in various disciplines throughout the university. Hence, whereas significant expertise related to general education, special education, and teacher quality and preparation exists within the College of Education and significant expertise related to evaluation methodology, psychometrics, and applied statistics exists within the Department of Psychology, graduate students have limited contact across the organization units within the university. Therefore, much expertise is not utilized, student training remains relatively compartmentalized, and the traditional discipline-specific boundaries of philosophy toward and approaches to educational questions remain. The establishment of the Florida Center for Reading Research (FCRR) provided a mechanism to begin to overcome the traditional boundaries of discipline, philosophy, approach, and expertise in questions related to reading, reading education, and teacher preparation. From its inception, FCRR was designed to employ an interdisciplinary approach to facilitating the reading achievement of children in the State of Florida. One goal of FCRR is to

increase the quality and quantity of faculty in the College of Education who take an empirical approach to reading education. For example, FCRR's funding includes resources to hire new faculty whose home departments are in the College of Education. Because of their joint appointment in FCRR, FCRR has significant influence on the criteria for selection of these faculty. Consequently, FCRR has had and will continue to have a significant influence in changing the culture of research within the College of Education by increasing the representation of highly qualified and empirically oriented faculty conducting high quality research. These recent and future hires will significantly enhance the overall training of students in the College of Education, leading to a substantial increase in doctoral-level graduates prepared to contribute to educational sciences during the course of their own careers.

Despite these influences in terms of faculty, there is no formal mechanism to include graduate students in the enhanced research environment or to take advantage of the interdisciplinary expertise and resources of FCRR. That is, FCRR has no independent source of funds to recruit and support graduate students. Faculty must depend on resources in their own departments to recruit students, and this has a significant impact on both the quality and quantity of students who can be recruited. The proposed program will take advantage of the interdisciplinary structure of FCRR and the resources of FCRR to provide graduate students from different relevant departments with coursework, experiences, and a common evidence-based approach to education science. Whereas FCRR has influenced the faculty side of the equation in the College of Education, this training program will allow a substantial enhancement of graduate student training in the College of Education by providing access to faculty from other disciplines with expertise and on-going projects in evaluation and measurement. Students within education and related fields often have substantial knowledge of issues related to curricula, teacher preparation, and the culture of schools; however, they often lack opportunities to develop strong research skills that would allow them to address meaningful educational questions in ways that yield accurate answers. Conversely, students in psychology have access to faculty with expertise in evaluation and measurement, they typically have limited access to faculty and students in other disciplines related to education who bring the perspective of educators to questions of educational science. Students within psychology, therefore, have many opportunities to develop strong research skills; however, they often lack opportunities to develop knowledge of issues and questions important to administrators and other educational professionals. This training program will merge these two strengths to provide training experiences for fellows from psychology, education, and related fields that will allow them to use high quality research methods to provide answers to questions that educators and policy makers find relevant for decision making.

Themes of the Training Program

The organizing themes of the training program concern interdisciplinary research in educational sciences related to reading. Specifically, the program will provide interdisciplinary training for fellows so that they can acquire competency to conduct high quality evaluation research in real world educational settings, and provide meaningful answers to educators and policy makers on questions of importance to them. Although the gold standard for such research will be randomized controlled trials (RCT), fellows will receive training in strong quasi-experimental designs that may be appropriate in situations where an RCT is not possible. Although a principal focus will be on evaluation research, we believe that it is not possible to separate measurement from evaluation. Therefore, a second focus of the training program will be to provide interdisciplinary training in measurement development and evaluation. All fellows

will receive core knowledge in both areas and fellows can choose to obtain additional expertise in methods relevant to evaluation, measurement, or both. Faculty associated with FCRR have an established history of conducting RCT evaluations of interventions, curricula, and professional development models related to improving the reading outcomes of students in pre-K to high school in school environments. FCRR faculty have an established record of working with schools, districts, and the State's Department of Education to address questions of interest to educators and policy makers. FCRR faculty also have an established record of developing widely used, commercially available standardized assessments for evaluating reading-related skills, like the *Test of Phonological Awareness* (Torgesen & Bryant, 1994, 2004), the *Comprehensive Test of Phonological Processing* (Wagner, Torgesen, & Rashotte, 1999), the *Test of Word Reading Efficiency* (Torgesen, Wagner, & Rashotte, 1999), and the *Preschool Comprehensive Test of Phonological and Print Processing* (Lonigan, Wagner, Torgesen, & Rashotte, 2003).

Structure of the Training Program

Fellows will complete the requirements of the degree program in their home departments, including required coursework. Fellows will complete additional coursework and research experiences to increase their capacity to conduct competent, meaningful, and relevant educational research as part of the training program. In combination with the research training opportunities offered through the on-going work at FCRR and the on-going research of project faculty, the training program will be designed around a core of five interdisciplinary courses in research methodology, measurement, quantitative analyses, core knowledge in reading, and practical issues in educational research. Four of these courses will be offered every other year to meet the needs of incoming fellows to the program. The core knowledge in reading course will take the form of an ongoing seminar co-taught by program faculty as well as visiting scholars (see below). In addition to these five courses, fellows will take two additional elective courses to increase their specialized knowledge in either evaluation research or psychometrics (e.g., advanced psychometrics, advanced hierarchical linear modeling, structural equation modeling).

Description of core courses. All core courses will be newly developed for this training program or significantly refined from existing courses. In most cases, the courses will be co-taught by faculty across disciplines to ensure interdisciplinary representations of the content area. "Advanced Research Methods in Educational Science" will introduce the scientific method and critical thinking as basic tools for accumulating knowledge. Fellows will receive grounding in the philosophy of science as well as practical training in designing experiments to address questions of causal inference. Topics to be covered include, critiquing journal articles, assessing the reliability and validity of measurement inferences, and constructing and evaluating experimental and quasi-experimental designs (Messick, 1995; Shadish, Cook, & Campbell, 2002; Suen, 1990). The overall goal of this course is to provide fellows with the knowledge and ability to apply the design that yields the greatest causal inference capacity given the limitations of the field situation. "Measurement in Educational Sciences" will provide fellows with knowledge in theories of test construction as well as exposure to the quantitative methods involved in psychometrics (e.g., classical test theory, item-response theory). "Advanced Quantitative Methods in Educational Sciences" will provide fellows with knowledge and experience to use appropriate statistical techniques in educational research. In addition to advanced applications of the general linear model, specific techniques for dealing with nested designs (e.g., hierarchical linear modeling) and measurement (e.g., applications of item-response theory) will be covered. "Political and Practical Considerations in Education Research" will provide fellows with knowledge of the issues that need to be addressed in mounting high-quality

program evaluations in schools. Topics to be covered include perspectives of principals and administrators, understanding the culture of schools and school systems, and solutions to common problems in field research as well as issues related to instructional strategies, student assessment, curriculum, leadership, and professional development. The overall goal of this course is to provide fellows with the knowledge and skills to be able to negotiate the complex political and practical realities of conducting program evaluations in schools. Working in collaboration with superintendents, principals, teachers, and other practitioners, fellows will identify a research agenda addressing questions of critical importance to educators in the field. A “Core Knowledge in Reading Research” seminar will cover background knowledge and cutting edge developments in the science of reading. This course will be co-taught by program faculty throughout the training program, allowing students to draw on the considerable expertise related to reading of the program faculty.

Research practica and requirements. A unique component of the planned training program is an explicit link between coursework and research practica. Fellows enrolled in both the Advanced Research Methods in Educational Science course and the Advanced Quantitative Methods in Educational Sciences course will participate in a practicum course the following semester in which they apply the content knowledge of the course to a current question or existing data within FCRR. For instance, in conjunction with the quantitative methods course, fellows may use item-response theory analysis to address questions concerning equivalence of item performance across subgroups of students with data generated by FCRR (see below under “Resources”) or apply hierarchical linear modeling to outcome data from a planned variation study using data generated by FCRR. In conjunction with the research methods course, fellows may work with FCRR staff to develop and assist in the implementation of an evaluation of new instructional programs. These practica are designed to turn knowledge learned in courses into practical experiences with real-world data. The goal of these practica experiences can be summarized by the phrase, “learning by doing.”

Data indicate a significant link between time commitment to research and student commitment to research (e.g., Hassan, 1997; Meyers, Reid, & Quina, 1998; Shivey, Worthington, Wallis, & Hogan, 2003), with earlier exposure to research activities during graduate training resulting in a stronger commitment to research and integration of research into scholarly activities. Consequently, we plan to require fellows to be actively engaged in research from the point of program entry to program completion. Initially this is likely to take the form of working with their graduate advisor, but we will expect fellows to quickly take a leadership role in research. Fellows in the program will be required to submit at least one publication-quality empirical manuscript for publication each year they are in the program. Given access to the substantial data archives of FCRR and program faculty, as well as the practicum experiences associated with core courses, we believe that this requirement can be achieved easily. To enhance fellow’s interdisciplinary perspectives on education research, at least one of these projects must be conducted in collaboration with a program faculty member outside of the fellow’s primary discipline. As a requirement of the training program, fellows’ dissertations will address practical questions in education. Fellows’ doctoral committees will be directed by a program faculty member and include at least one additional program faculty member.

Colloquium series. The training program also will have a colloquium series in which we invite researchers who have significant experiences with educational science to participate in a series of seminars and colloquia for fellows. In addition to describing their work that is relevant to educational science (colloquium), speakers will share the lessons learned about the politics

and pragmatics of conducting research in applied settings (seminar). Our goal in this seminar and colloquium series is to not only advance fellows' content knowledge but to provide them with insight into how to be successful in conducting rigorously designed, important, and educationally relevant research. We think the best way to impart that knowledge to students is to have them hear it firsthand from those who have figured out how to do it. Fellows will have an opportunity to consult with these experts on questions and issues specific to the fellow's area of interest and current research projects, and program faculty will get input on the program from these experts in terms of training model, direction, and fellows. We anticipate inviting 12 to 14 colloquium speakers each year of the training program. An initial list of invitees includes

(b)(4)

We have already made contact with these individuals and names denoted with an asterisk have agreed to participate at the time of submission.

Advisory committee. To ensure that the research focus of fellows is linked to the practical needs of educational policy makers, educational leaders, teachers, and students, an advisory committee will assist in guiding fellows' efforts. This group will meet at least once a semester with students and faculty to discuss research questions and vet ideas in light of the practitioners' most pressing problems. The purpose of including an external advisory committee is to assist fellows in building much stronger connections between research-based insights and improved practice. The advisory committee is composed of educational leaders with diverse roles, experiences, and expertise. The advisory committee (complete descriptions of current positions and qualifications of members are included in Appendix C) includes Mary Laura Openshaw (Director, Just Read, Florida!), Bill Montford (Superintendent, Leon County Schools, Florida), David Mosrie, Ph.D. (Chief Executive Officer, Florida Association of District School Superintendents), Simmie A. Raiford, Ph.D. (Chief Legislative Analyst for the Council on Education Policy Research and Improvement), Bob Smith, (Executive Director of North East Florida Educational Consortium), Frances Gupton (Coach, Partnership to Advance Student Success), and Fred Gainous, Ed.D. (President, Florida A&M University). Each member plays a powerful role in directly or indirectly shaping educational experiences for thousands of Preschool to 12th grade students in Florida. Their informed perspectives will provide a rich resource for the fellows as they move through the program, and the advisory committee will serve as a valuable resource to provide input to and feedback on the training program to the project director and program faculty.

Evaluation of fellows. An annual evaluation of every fellow in the program will be conducted at the end of each academic year. The evaluation will require each fellow to submit a binder that contains the products that were completed in the previous year, including (a) a write-up for the special projects completed in conjunction with coursework, (b) at least one manuscript submitted for publication, (c) transcripts with course grades for previous semesters, and (d) an updated CV. The Fellow Evaluation Committee (FEC), comprised of the Program Director, the co-Program Director, and two additional program faculty, will review the binders and rate the progress of each student on a 4 category scale, including:

Adequate Progress (AP). Fellow meets all of the criteria set forth in the program requirements.

Fellow is in good standing in her or his home department; all projects associated with coursework will have been completed in a timely manner; a manuscript will have been submitted for publication; fellow has maintained grades of As or Bs in all of her or his coursework; and fellow is making progress toward completion of degree requirements.

Additionally, the FEC will ensure that the work performed is relevant to education science.

- *Needs Improvement (NI)*. Fellow has not met at least one of the criteria listed above, and the fellow was not previously on probation (see below). Fellows rated NI will have one semester to raise their rating to AP. Depending on the reason for the NI rating, the FEC and the fellow's mentor will meet with the student to develop a plan to address the fellow's lack of adequate progress. This plan may include additional preparatory coursework, additional assistance with required projects, or assignment of a co-mentor.
- *Probation*. Fellow received a rating of NI previously and has not yet improved to meet AP standards. This student will be placed on Probation, and given one more semester to improve to meet AP criteria.
- *Termination*. Fellow will be terminated from the training program. This would occur if the student had not received a rating of AP for three consecutive semesters.

Ongoing Research, Archival Data, and Their Uses in Training

As noted above, the structure of the training program will provide formal links between coursework and research practica. Hence, in addition to research conducted by fellows as masters or doctoral theses, fellows will have a formal program requirement to participate in meaningful educational research. The program will provide fellows with access to ongoing research projects and archival data to complete this requirement. In the course of the program, fellows will be required to work with a program faculty member who is outside of their discipline to complete a research project (e.g., a fellow from education would work with program faculty from psychology). In addition to the ongoing educational research projects and archival data within the umbrella of FCRR (described below under "Resources"), program faculty have a large number of ongoing education research projects as well as large archival data sets. Brief descriptions of some of the ongoing research of program faculty are included below. Additional research projects are described in Appendix D.

- *Enhancing Literacy Outcomes for Young Children* (PI: Lonigan; funded by Interagency Educational Research Initiative-NSF; 2001-2007). This project examines the impact of an early literacy curriculum for preschool children at risk of reading difficulties. In addition to the curriculum evaluation, the study examines two models of professional development and the incremental benefit of adding a parent intervention component. All of these factors are examined in a RCT design with teachers and children from Head Start centers. A mixed method approach is used to examine how characteristics of children, families, and teachers relate to the impact of the program variations as well as collect data to identify potential modifications required to produce the desired outcomes.
- *Evaluating the Effectiveness of Preschool Literacy Curriculum for Children At-Risk* (PI: Lonigan; funded by the Institute of Education Sciences; 2003 - 2007). This project is using a RCT design to examine the impact of two distinct preschool early literacy curricula on the academic outcomes of young children at-risk of later academic difficulties. Additionally, the study is designed to evaluate the relative impact of various teacher, school, and child characteristics on curriculum impact, the relative impact of first versus second year of curriculum implementation, and how variations in professional development for teachers affects fidelity of implementation and impact on educational outcomes for the children.

- *Development & Early Identification of Reading Disability* (PI: Lonigan; funded by NICHD; 2000 - 2006). The objectives of this multi-study longitudinal project are to identify the domains and ages at which preschool children who will develop reading disabilities (or skilled versus less skilled reading can be identified), and to determine if rate of growth of preliteracy skills during preschool can serve to identify children who will have difficulties learning to read. This study uses structural equation modeling, growth curve modeling, and logistic regression to test alternative models of the causal relations between skills in oral language, phonological processing, and print processing with reading. One longitudinal study follows approximately 1,000 children recruited when they were between the ages of 2- to 5-years for a period of five years, providing data on developmental continuity of skills across the preschool period and into early elementary school. A second longitudinal project intensively examines the development of the preliteracy skills of approximately 300 children during the preschool year and follows these children as they begin elementary school.
- *Phase I Early Reading Intervention Study: Getting Ready for Scale-up* (Schatschneider: funded by Interagency Educational Research Initiative-NSF; 2004-2006). This project, conducted in collaboration with Benita Blachman at Syracuse University, is designed to examine the impact of different components of reading instruction in eight schools. Schools are block randomized to two different tutoring conditions.
- *Preventing Reading Difficulty in Young Children*. (Schatschneider: funded by Interagency Educational Research Initiative-NSF; 2001 - 2006). This project, conducted in collaboration with Donna Scanlon and Frank Vellutino at SUNY Albany, involves a large longitudinal study of approximately 1400 children who are currently enrolled in “high risk” schools in the state of New York. The project’s focus is to examine different ways that the reading abilities of children in these schools can be improved. Using a RCT design, participating schools have been assigned to one of three treatment conditions (professional development for the teachers, tutoring for children who are lagging behind, and a third condition that combines both professional teacher development with tutoring) or a control condition.
- *A Randomized Field Trial of Reading Interventions for Struggling Readers in Grades 3 and 5*. (PI: Torgesen; funded by the Institute for Education Sciences, Title 1 Evaluation from the USDOE, the Heinz foundation, the Haan foundation for Children, and several other foundations). This project is the largest study of intervention methods for older children ever conducted. It is examining outcomes from four different instructional programs that are being delivered to 120 students each. The major questions being addressed in the study are: (a) what proportion of students who begin the intervention below the 30th percentile in basic word reading skills are reading at grade level after 100 hours of high quality intervention delivered in groups of three students; (b) are there differences in outcomes between interventions that focus primarily on word level skills vs. those that split intervention focus between word level and reading comprehension skills; and (c) are there differential effects of different intervention methods depending on entering characteristics of the students. The research is being conducted in 50 schools in the Pittsburgh area.
- *An Examination of Two Methods to Enhance Reading Skills in Severely Disabled Older Readers* (PI: Torgesen; funded by NICHD). This project is focused on methods to improve reading skills in students with learning disabilities (average age 10 years) who begin the intervention at about the 2nd percentile in their word level reading skills. Using a RCT design, 60 students are assigned to one of two interventions: (a) a focus on building broad and deep accuracy in reading, or (b) a focus on building accuracy as a foundation for fluency. Students

- are provided 133 hours of instruction in a combination of 1:1 or 1:2 teacher:pupil ratios, and they are then followed for one year after interventions.
- *Origins of Individual and Developmental Differences in Reading Comprehension* (PI: Wagner; funded by Institute for Education Science, U. S. Department of Education: 2003-2007). This study uses both experimental studies with a RCT design and a longitudinal correlational study with confirmatory factor analysis and structural equation modeling of latent variables to examine potential origins of both individual and developmental differences in reading comprehension.
 - *K-16 Multi-University, Reading, Mathematics and Science Initiative (MURMSI)* (PI: Hassler; funded by the Institute of Education Sciences; 2003 - 2005). This project is designed to improve teaching and learning in Reading, Mathematics and Science in Florida's K-12 schools with a special emphasis on students considered "at risk" due to economic or other conditions. In addition to its coordinating role in developing a research agenda through collaborative partnership with other state universities and stakeholders in Florida and coordinating projects in other Florida universities, two MURMSI RCT studies are being conducted at FSU. The "Applied Data Analysis Project for Principals and Teachers (ADAPT)" will test the impact of use of data to inform instructional and curricular decision-making on student performance, using student reading performance on the Florida Comprehensive Assessment Test. The "Computer-Assisted Personalized Approach (CAPA)," will assess the impact of teacher-directed use of technology on student performance in physics. Students in a CAPA homework group will do their assignments on-line, receive immediate feedback on the correctness of their answers, and get multiple tries to solve problems. Students in a traditional homework control group will complete written hand-graded assignments.
 - *Teacher Quality Research* (Roehrig; pending funding by the Institute of Educational Sciences; 2004 - 2008). The purpose of this project is to identify constructs related to teachers' attributes, knowledge, and classroom practices that are highly predictive of student growth in reading and to develop valid, reliable, and efficient instruments to tap them.
 - *Tutor Assisted Learning Strategies* (Al Otaiba; funded by FSU Research Foundation). This project examines the short- and long-term impact of an early literacy tutorial intervention for kindergarten children at risk of reading difficulties. In addition, the project explores whether learner characteristics moderate the effects of this intervention that is being delivered by well-trained volunteers. The project has been piloted and will be field-tested with AmeriCorps members.
 - *Statistical Assessment of Test Structure* (Tate: funded by the Florida Department of Education). Knowledge of the statistical structure (or "dimensionality") of a large-scale assessment is important for confirming various aspects of test validity. This research compares various methods of assessing test dimensionality and explores the implications of multidimensionality for total test and subscore performance.
 - *Method of School-Level Assessment of Average Student Achievement* (Tate: funded by the Florida Department of Education). Although most applications of modern test theory (a.k.a. item response theory or IRT) are for the estimation of achievement of an individual student, group-level IRT models also have been developed, allowing the efficient direct assessment of a school achievement average. This research examines the precision of the results from such models, the robustness of these methods to violations of assumptions, and their application to large-scale assessment in Florida.
 - *Language and Literacy Outcomes for Children with Disabilities in High Poverty Communities.*

(PI: Goldstein; funded by U.S. Dept of Education, OSEP; 2004-2007). This project funds doctoral trainees in communication disorders who are conducting research to develop improved educational programs that produce functional language and literacy outcomes. Trainees are collaborating weekly with public school personnel in Professional Development School partnerships or in other early intervention agencies targeting high poverty and culturally diverse communities. Three research efforts investigating the effects of embedding language and literacy instruction into everyday interactions in the classroom and home are underway (see Appendix D).

How the Proposed Program Addresses Issues Raised in RFA

As noted throughout this proposal, the proposed training program will provide a rich interdisciplinary training experience to fellows from the disciplines of psychology, education, and communication disorders. We anticipate that these fellows will go on to careers in educational sciences, with a focus on evaluation and measurement. Consequently, the proposed program will enhance the numbers of personnel who are capable of producing high quality education research, leading to an increase in evidence that provides meaningful answers for educators and policy makers about what works for whom.

Potential Career Development Opportunities for Fellows

The program will provide fellows with access to policy makers, resources, courses, and experiences that will substantially enhance their capacity to become visible educational scientists. Program faculty will individually and collectively mentor fellows to support the development of careers in educational science. Students should complete the program with established track records of publication and presentation of high quality educational research, making them desirable candidates for academic positions. Additionally, program faculty will facilitate professional networking at professional conferences to increase fellows' exposure to leaders in the field of educational sciences (above the exposure to professionals in the planned colloquium series). Finally, we have arranged an internship experience with the National Academy of Sciences' National Research Council (see letter in Appendix A) that some fellows may use to enhance their knowledge of national policy related to education. We plan to explore the development of similar internship experiences with other agencies and professional organizations.

Advertising and Recruitment for Program

Recruitment of fellows. Appropriate descriptive materials about the program will be developed (e.g., website, flyers, brochures, letters) and a variety of recruitment procedures will be employed to attract high quality doctoral-level students to the program. Recruitment materials will be available utilizing traditional university recruitment procedures and procedures specialized to reach the audiences most interested in educational sciences. Procedures will include (a) developing a program website and requesting it be linked to websites of relevant professional and student organizations (e.g., APAGS, ASHA, AERA); (b) placing ads in nationally recognized journals and newsletters of such organizations as APA, AERA, and ASHA and accessing these organizations' list servers to distribute information about the program; (c) posting flyers as well as personally distributing them at national and regional conferences of professional organizations relevant to educational sciences; (d) sending mailings of information for posting to other universities that have programs in psychology, communication disorders, special education, and early childhood development and education; (e) having current fellows serve as "ambassadors" for the program when they attend professional conferences; and (f) using personal contacts of program faculty and colleagues to provide information about the program.

Number of fellows. We intend to provide up to four years of support at the IES specified rate of \$30,000 per year for each fellow admitted to the program, conditional on adequate progress in the program. In Year 1, we intend to admit 8 fellows to the program from graduate students who have already been admitted to one of the participating departments. In Year 2, we plan to admit 10 additional fellows, specifically recruited for this program, and in Year 3, we plan to admit an additional 9 fellows to the program, specifically recruited for this program. Because of the differing home department program requirements of graduate students admitted as fellows and because fellows from different home departments enter graduate training at different points of post-bachelor education (e.g., almost all students in psychology enter with only a bachelors degree whereas all students in communication disorders enter with a masters degree), it is likely that some fellows will take less than four years to complete their degree requirements. We will continue to admit fellows throughout the 5-year period of the grant up to the number of available funded slots each year. Over the life of the grant, we estimate that we will admit a minimum of 38 fellows to the program, with sufficient funding to provide a full four years of support for all fellows admitted in Year 1 through Year 3 ($n = 28$). We plan to continue the training program beyond the initial five-year period, either via a continuation of the program by IES or by seeking alternative funding in the form of a NIH training grant. Consequently, we will continue to admit fellows beyond Year 3 with the understanding that they may complete the program using alternative funding sources, like an NIH training grant, support from program faculty's research grants, departmental funding, FCRR funding, or individual NIH predoctoral awards.

Recruitment of members of traditionally underrepresented groups. Florida State University is committed to nondiscrimination based on race, creed, color, gender, religion, national origin, age, disability, and status relative to Vietnam Era veterans. The university maintains an active affirmative action policy and program that supports the recruitment and retention of minority individuals in every phase of its operation. These procedures will be followed in the employment of staff and recruitment of fellows. Additionally, we will employ a number of specific strategies to ensure success in recruitment of minorities and individuals with disabilities (Washington & Andrews, 1998). First, we have established a partnership with Florida A&M University (FAMU), a historically Black college located in Tallahassee, that will provide a means of recruiting qualified undergraduate and masters-level students into the program (see letter of support in Appendix). This partnership also will provide opportunities for faculty at FAMU to work in collaboration with program faculty to design and offer courses to prepare students to participate in advanced training in educational sciences. Second, Dr. Gainous, the current president of FAMU is a member of our Advisory Committee, and he will serve as a valuable resource for identifying other viable contacts and channels for recruitment. Third, we will access technology and media to advertise in a variety of ways that emphasize our interest in supporting individuals from underrepresented populations, including: (a) developing a program website and linking it to sites with documented high hit rates by underrepresented populations, (b) placing ads in nationally recognized journals and newsletters of such organizations as the ASHA, TASH, CEC and DEC, AAMR, AERA, the American Association for Higher Education, and minority group publications, such as *Issues in Black Higher Education* and *Journal of Blacks in Higher Education*; (c) posting flyers as well as personally distributing them at national and regional conferences of professional organizations and their minority caucuses; and (d) sending mailings of information for posting to other universities and especially historically Black colleges and universities that have programs in psychology, communication disorders, special education, and early childhood development and education. Finally, we will form alliances with other

constituencies to identify individuals from underrepresented populations who have the potential for and interest in education science (e.g., obtaining the membership lists of professional organizations dedicated to underrepresented populations; mailing information for posting to institutions of higher education like Howard University, Hampton University, and Gallaudet University that have high enrollments of individuals from underrepresented populations; using personal contacts with colleagues at other universities and professional organizations to describe this project, our interest in enrolling students from underrepresented populations, and strategies for them to facilitate potential candidates' applications).

INSTITUTIONAL COMMITMENT & PROGRAM MANAGEMENT AND EVALUATION

All of the organizational units, departments, and colleges associated with this project have a strong commitment to the success of the program (see letters of support in Appendix A). As detailed throughout this proposal, FCRR, the lead organizational unit of the project, is committed to adding the training of the next generation of educational scientists to its primary mission. As noted below, FCRR will provide space, resources, and access to ongoing projects and future opportunities in support of the program. Additionally, the majority of faculty time devoted to this project will be supported as a part of FCRR faculty members' assignment of responsibilities to FCRR. All participating departments have agreed to support the training program by allowing admission of program fellows to their programs as fellows' home departments. Within the university, we will seek approval for the training program as a certificate program (the equivalent of a minor in educational sciences research). The commitment of the university and the State of Florida to the mission of FCRR is evident in the establishment of a free-standing interdisciplinary organization unit that draws personnel from across traditional boundaries within the university and the fact that the State Legislature recently provided permanent funding to FCRR.

Data concerning recruitment, retention, and graduation of graduate students from the participating departments is included in Appendix B.

Program Management

Drs. Lonigan (Program Director) and Schatschneider (co-Program Director) will be responsible for the overall management of the training program, including being responsible for ensuring that fellows make adequate progress in the program and coordinating fellows' research responsibilities with FCRR and program faculty to ensure that fellows have timely access to required resources. Dr. Lonigan will have lead responsibility for communications between the training program and IES, participating departments, other organizational units, and the Advisory Committee. A program coordinator will manage the day-to-day operations of the program. This will include scheduling meetings, keeping records of requirements fellows have met, ensuring that funds are dispersed according to program requirements, providing information to fellows about courses, schedules, and colloquia, handling distribution and receipt of application materials for the program, having initial communication with potential applicants to the program, arranging required travel for fellows, and communication with fellows' home departments.

Allocation of program funding for fellows will roughly follow the ratio of program faculty from the participating departments. That is, fellows admitted to the program will follow an equitable distribution according to faculty participation in the training program. Although we anticipate receiving sufficient applications from each participating department to fill available funding slots, fellows accepted into the program will need to meet specified selection criteria (e.g., GRE \geq 1000, GPA \geq 3.5) and they must be matched with a program faculty who agrees to serve as their primary mentor. An Admissions Committee, consisting of Drs. Lonigan and

Schatschneider, a member of the Advisory Committee, and a faculty representative from each participating organizational unit of the program will be responsible for ensuring that fellows admitted to the program have a high probability of success in the program and beyond and that funded program slots are equitably distributed among program faculty. The program will provide up to four years of funding to fellows, conditional on adequate progress in the program, at the IES specified rate of \$30,000 per year plus tuition and fees. We anticipate that each program faculty member will serve as primary mentor to approximately three fellows over the course of this funding period.

Evaluation of Training Program

The ultimate measure of success of a graduate training program is the success of its graduates. We would define a successful graduate from our training program as one who continued to contribute to the body of scientific knowledge in the field of education. The successful graduate could be gainfully employed in a number of positions that would advance this goal. Although our primary goal is to produce high quality graduates that will enter academic positions to continue their research and training of other students, we realize that a successful graduate of our program could also further educational science by entering related professions outside of academia, such as program evaluation and test construction. Consequently, the ultimate measure of success of the proposed training program cannot be known until sufficient fellows complete the program to identify their career paths and their levels of productivity related to educational sciences. As an index of this overall measure of success, students who have graduated from our program will be tracked and periodically contacted to update our records as to their employment and productivity post graduation. We will request CV's from our graduates at regular intervals as well as send them a questionnaire about how well the program prepared them for their careers and areas in which we might make improvements. We also will track employment and productivity on other students in fellows home departments to provide a comparison group against which we can measure success of the program's graduates (while sheepishly noting that the best we could do in this evaluation is employ a regression-discontinuity design). In addition to collecting this long-term evaluation information, we will collect short-term measures of success. These measures would indicate that the fellow is likely to be competitive for high quality jobs post-graduation. Measures such as number of publications in high-quality journals, presentations at professional conferences, and applications for external funding are good indicators that fellows will be competitive and productive following graduation (Hassan, 1997). Because there is a relation between performance in relevant courses and ability to apply scientific knowledge (Onwuegbuzie, 2001), additional data concerning success of the training program will be the number of fellows who achieve an AP rating each year (see above), fellows' GPAs (relative to other students in fellows' home departments), time to completion of degree (relative to other students in fellows' home departments), number of fellows retained in training program, and reports from the Advisory Committee concerning the focus and quality of fellows' applied work.

PERSONNEL

Program Faculty

Christopher J. Lonigan, Ph.D. (Program Director) is a Professor of Psychology at Florida State University and the Associate Director of the Florida Center for Reading Research (FCRR). Dr. Lonigan is a clinical psychologist with expertise in applied developmental issues, early literacy, quantitative methods, preventative interventions, and longitudinal projects. Dr. Lonigan is or has been the Principal Investigator for an IES Preschool Curriculum Evaluation Project,

three NICHD-funded research projects on the development of early literacy, a NSF-funded research project on preschool intervention, a DHHS-funded research on the development and promotion of early literacy in children attending Head Start, and he has been a Co-Principal Investigator on an NICHD-funded research project examining the efficacy of a preventative preschool intervention for children at risk of reading problems and the development of reading problems (the IES, NSF, DHHS and two of the NICHD projects involve RCTs of interventions or curricula). Dr Lonigan will be responsible for the overall administration of the program, management of the program, and interactions with IES. In addition, he will co-develop several of the core classes (e.g., with Drs. Torgesen, Schatschneider, and Hassler), co-teach some of the core classes, and serve as mentor to fellows. In collaboration with Dr. Schatschneider (Co-Project Director) and the Program Coordinator, Dr. Lonigan will facilitate fellows' research activities within FCRR, conduct evaluations of fellows' progress in the program, evaluate the overall success of the training program, and consult with the Advisory Committee periodically concerning needed modifications to the program.

Christopher Schatschneider, Ph.D. (Co-Project Director) is an Associate Professor of Psychology at Florida State University and a Faculty Member of the Florida Center for Reading Research. Dr. Schatschneider has significant expertise in quantitative methods and research design. He has published in the area of individual differences in early reading acquisition, measurement, and item response theory, and the use of hierarchical linear models in developmental research. Dr. Schatschneider has been a NICHD Principal Investigator in a research project on bilingual literacy and is currently a Co-Principal Investigator on four federal grants (two IERI-NSF and two NICHD), which focus on the development of early reading skills. Three of the four current grants involve the use of randomized trials in the research design. In collaboration with Dr. Lonigan, Dr. Schatschneider will facilitate fellows' research activities within FCRR, conduct evaluations of fellows' progress in the program, evaluate the overall success of the training program, and consult with the Advisory Committee periodically concerning needed modifications to the program. In addition he will co-develop several of the core classes, co-teach some of the core classes (advanced research methods, qualitative analyses), and serve as mentor to fellows.

Joseph K. Torgesen, Ph.D. (Program Faculty) is the Robert M. Gagne Professor of Psychology and Education and the Director of the Florida Center for Reading Research. Dr. Torgesen is a nationally recognized expert in learning disabilities, reading, remedial interventions, and teacher professional development. Dr. Torgesen is or has been the principal investigator on several NICHD and IES funded research projects involving randomized evaluations of interventions for struggling readers in grades 1 through 5. He was the principal engineer of Florida's Reading First Initiative, and he is the principal investigator for a U.S. Department of Education Award to provide technical assistance to Eastern States' Reading First programs. Dr. Torgesen, in collaboration with Drs. Lonigan, Wagner, and Hassler will co-develop the core content seminar for the program and the educational research policy course. He will co-teach the core content seminar and serve as mentor to fellows.

Richard K. Wagner, Ph.D. (Program Faculty) is the Alfred Binet Professor of Psychology and Associate Director of the Florida Center for Reading Research. Dr. Wagner is a nationally recognized expert in the development and measurement of early reading skills. He has substantial expertise in research methods and quantitative methods, including measurement and item response theory, multivariate analyses, and structural equation modeling. Dr. Wagner has the principal investigator on several NICHD funded research projects involving the development

of early reading skills, co-principal investigator on several NICHD funded research projects involving the evaluation of early reading interventions for struggling readers, and is principal investigator on an IES funded research project examining reading comprehension in school age children. In collaboration with Drs. Lonigan, Torgesen, Schatschneider, Al Otaiba, Roehrig, Tate, and Kamata, Dr. Wagner will co-develop the core content seminar for the program, the advanced research methods course, and the quantitative methods course. He will co-teach the core content seminar and the quantitative methods course, and serve as mentor to fellows.

Laura B. Hassler, Ph.D. (Program Faculty) is an Associate Professor of Educational Leadership and Policy Studies and the Director of the Learning Systems Institute (LSI), an interdisciplinary research and development unit of Florida State University. Dr. Hassler's experiences for 12 years as a special education teacher, 14 years as a school-based administrator-including 8 years as a school principal, and her role in LSI provide her with firsthand knowledge and expertise concerning the challenges encountered in undertaking major educational reform efforts at the classroom, school, and district level. Dr. Hassler is the principal investigator for a number of federal and state-level grants involved with the evaluation of initiatives to improve teacher quality and school quality. In addition, she oversees a variety of other educationally relevant projects in her role as Director of LSI. Dr. Hassler serves on the boards and executive committees of numerous organizations and committees associated with the development and evaluation of educational policy in Leon County and the State of Florida. In collaboration with Drs. Lonigan, Torgesen, Schatschneider, and Roehrig, Dr. Hassler will co-develop the educational research policy course and the core content seminar for the program. She will teach educational research policy course and serve as mentor to fellows.

Alysia D. Roehrig, Ph.D. (Program Faculty) is an Assistant Professor of Educational Psychology and Learning Systems at Florida State University, and she is a Faculty Associate of the Florida Center for Reading Research. Dr. Roehrig is an expert in teacher quality and effective teaching practices. She currently has several on-going research projects related to improving teachers' practices in the classroom and has a grant under review at IES to evaluate the effectiveness of some of these teaching practice modifications. In collaboration with Drs. Lonigan, and Torgesen, Dr. Roehrig will help develop the core content seminar for the program and serve as mentor to fellows. Additionally, she will serve a key role to ensure that the perspective of the discipline of education is represented in all levels of training and that fellows in the College of Education participate fully in the program's training activities.

Stephanie Al Otaiba, Ph.D. (Program Faculty) is an Assistant Professor of Special Education and Vocational and Rehabilitation Services at Florida State University, and she is a Faculty Associate of the Florida Center for Reading Research. Dr. Al Otaiba has been teaching and studying children with special needs for over 20 years, and she has authored or co-authored several articles and book chapters on that subject. She has expertise in the early identification of children at risk for reading failure, early literacy interventions for children with disabilities, and training teachers to work with students with special needs. In collaboration with Dr. Roehrig, Dr. Al Otaiba will help facilitate the integration of the discipline of education into the core curriculum of the program. She will assist in the development of the core content seminar, particularly as it relates to students with special needs, and she will serve as a mentor to fellows.

Akihito Kamata, Ph.D. (Program Faculty) is an Associate Professor of Educational Psychology and Learning Systems at Florida State University. Dr. Kamata is an expert in psychometrics, including Item-Response Theory and related quantitative methods. His recent work, funded by IES and the State of Florida, has examined how adaptations to tests like the

NAEP and FCAT affect the performance of test items. Dr. Kamata teaches several graduate-level courses on psychometrics and quantitative methods, including measure development and IRT analyses. In collaboration with Drs. Schatschneider, Lonigan, Wagner, and Tate, Dr. Kamata will co-develop the quantitative methods course, the advanced research methods course, and the advanced psychometrics course. He will teach or co-teach these courses and serve as a mentor to fellows.

Richard L. Tate, Ph.D. (Program Faculty) is an Associate Professor of Educational Psychology and Learning Systems at Florida State University. Dr. Tate is an expert in multivariate statistics, including Hierarchical Linear Modeling and Item-Response Theory. His recent work has focused on psychometric analyses. Dr. Tate teaches several graduate-level courses on psychometrics and quantitative methods. In collaboration with Drs. Schatschneider, Lonigan, Wagner, and Tate, Dr. Tate will co-develop the quantitative methods course, the advanced research methods course, and the advanced psychometrics course. He will teach or co-teach these courses and serve as a mentor to fellows.

Roxanne F. Hudson, Ph.D. (Program Faculty), will be an Assistant Professor of Early Child and Elementary Education at Florida State University (starting fall 2004), and she will be a Faculty Associate of the Florida Center for Reading Research. Dr. Hudson's area of interest includes remedial interventions for struggling readers as well as the development of reading skills in English Language Learners. Dr. Hudson is one of several recent hires associated with the Florida Center for Reading Research intended to increase the quality and degree of interdisciplinary collaboration in the Florida State University's College of Education. Dr. Hudson's empirical focus, expertise, and focus substantially increases the depth of high-quality research capacity in the College of Education. Dr. Hudson will mentor program fellows and help facilitate the integration of the discipline of education into the core curriculum of the program. Additionally, she will participate in the core content seminar, particularly in reference to the needs and development of English Language Learners.

Howard Goldstein, Ph.D. (Program Faculty) is the Donald M. Baer Professor and Chair of Communication Disorders at Florida State University. Dr. Goldstein's area of expertise involves the development and evaluation of early intervention programs for children with communication disorders. Most recently, he has focused on evaluations of intervention programs for improving the language and literacy outcomes for young children with communication impairments, as well as the preparation of personnel who will work at the interface of research and policy. He has current funding from the U.S. Department of Education to evaluate the impact of various interventions for children with communication impairments. Dr. Goldstein will co-teach the core content seminar and will serve as a mentor to fellows.

Thomas A. Lynch, Ph.D. (Program Faculty) is the Director of the Center for Economic Forecasting and Analysis and an Adjunct Professor of Economics, Public Administration, Urban Planning at Florida State University. Dr. Lynch is an economist with expertise in the economics of educational policy and practice. In collaboration with Drs. Lonigan and Hassler, Dr. Lynch will co-develop the core content seminar and the educational research policy course. He will co-teach these classes as well as offer a seminar to program fellows on the economics of education. Dr. Lynch's participation in this program will bring an important area of expertise relevant to educational research and policy not currently represented by other program faculty.

Carol M. Connor, Ph.D. (Program Faculty) will be an Assistant Professor of Early Child and Elementary Education at Florida State University (starting fall 2004), and she will be a Faculty Associate of the Florida Center for Reading Research. Dr. Connor's area of expertise includes

the way in which characteristics of learners influence their responses to education and educational interventions. Additionally, her professional background and research has focused on children with special needs in educational settings, particularly children with hearing impairments. Dr. Connor is well versed in research methodology and sophisticated quantitative methods (e.g., HLM). In collaboration with Drs. Lonigan, Schatschneider, and Torgesen, Dr. Connor will help develop the core content seminar and the advanced research methods course. She will serve as mentor to fellows. Dr. Connor also will serve a key role to ensure that the perspective of the discipline of education is represented in all levels of training and that fellows from the College of Education participate fully in the program's training activities. Dr. Connor substantially increases the depth of high-quality research capacity in the College of Education, and, given her training and expertise, she will significantly enhance the interdisciplinary capacity of the training for fellows associated with this project.

RESOURCES

The proposed training program brings together faculty and resources from multiple departments, colleges, and institutes within FSU. These organizational units include the Departments of Psychology, Early Child and Elementary Education, Educational Psychology and Learning Systems, Educational Leadership and Policy Studies, Special Education and Vocational and Rehabilitation Services, and Communication Disorders; the College of Education and the College of Arts and Sciences; the Center for Economic Forecasting and Analysis, Learning Systems Institute, and the FCRR. Students across these organizational units will be united under the umbrella of the training program and will receive specialized interdisciplinary training and experiences in educational science with a focus on reading research; however, all fellows also will retain the identity of their home department, which will award their doctorate. Consequently, fellows will have access to the resources of their home departments (e.g., courses and faculty not a part of the training program, opportunities to teach courses) as well as the university (e.g., a major research library system, including on-line access to journals, search engines, and interlibrary loan). The program will be housed in FCRR. Additionally, fellows will have access to the resources of the other institutes affiliated with the program.

Florida Center for Reading Research

FCRR is an interdisciplinary organizational unit of FSU. The majority of the faculty, including the program director and co-program director, are faculty associates of FCRR. FCRR was established in 2002 by the Governor's office and the Legislature with a four-fold mission:

- ❑ The production of scientific knowledge about reading, reading development, reading assessment, and reading instruction that will improve reading outcomes for all children in the State of Florida and throughout the United States.
- ❑ The use of high quality research methods to address problems in policy and practice that will have a direct impact on reading outcomes for children in the State of Florida.
- ❑ The dissemination of reading research through a variety of methods appropriate for decision makers, teacher educators, practitioners and others who are accountable for ensuring that Florida students learn critical reading skills
- ❑ Provide leadership and technical assistance in the design and implementation of Florida's Reading First grant, which is the largest initiative ever undertaken in the state (and nationally) to improve reading outcomes for students in grades K-3.

All faculty within FCRR hold tenure earning appointments in an academic department within the University. Currently, six faculty members are formally associated with the center: Dr. Joseph Torgesen (Director), Dr. Christopher Lonigan (Associate. Director), Dr. Richard Wagner

(Associate. Director), Dr. Christopher Schatschneider (Psychology), Dr. Stephanie Al Otaiba (Special Education), and Dr. Alysia Roehrig (Educational Psychology). In addition, FCRR has recently recruited two new faculty in Education who will begin in the fall of 2004, Dr. Carol Connor and Dr. Roxanne Hudson, and FCRR is also in the process of recruiting Dr. Ralph Radach (Psychology) who is an experienced researcher and expert in reading research using computer-linked eye movement technology. The center has 1.6 million dollars per year in permanent funding from the State of Florida to partially cover salaries for faculty, staff salaries, and infrastructure. We expect to hire two additional faculty members in education and one additional faculty member in psychology within the next two years. When recruitment is complete, we expect to have six faculty from education and six faculty from psychology. In addition to faculty, the Center currently has six senior staff (two with Ph.D.s), two postdoctoral fellows, and 10 support staff. The center is housed off campus in approximately 15,000 sq. feet of office space. In addition to its mission in the State of Florida, FCRR is the Eastern Regional Reading First Technical Assistance Center (ERFTAC). In this role, FCRR's ERFTAC staff (an additional 6 professional staff) work with states to develop training programs aligned with scientifically based reading research and state standards, develop training on use of progress monitoring for tracking outcomes and informing instruction, and develop staff professional development of various core reading, supplemental and intervention programs.

In addition to the grant-funded research being conducted by faculty associated with the fellowship program (see above), there are several ongoing major projects within FCRR that will provide opportunities for fellows to gain training and experience in educational research.

Progress Monitoring and Reporting Network. As part of FCRR's ongoing work in support of Reading First in Florida, we have developed a web-based system to store progress monitoring and outcome data for all students in Reading First schools. The system is called the Progress Monitoring and Reporting Network (PMRN), and it currently contains data for 160,000 students in grades K-3. Next year the number will go up to 200,000. We have incorporated a formal system for evaluating the reliability of the test data in this system, and initial estimates indicate that, with several minor exceptions, it meets acceptable standards for measurement reliability. By the end of 2004, the system will contain data from four (Fall, Winter 1, Winter2, and Spring) assessments using the Dynamic Indicators of Basic Early Literacy Skills (DIBELS; Kaminsky & Good, 1996), scores from the Peabody Picture Vocabulary Test for all K-3 students, reading comprehension scores from the SAT-10, reading vocabulary scores from the Gates-MacGinitie test, and scores for third graders on Florida's Comprehensive Assessment Test. The system retains data on students for five years, making it possible to examine student, teacher, school, and district level data longitudinally. The system also contains extensive demographic information about each student (e.g., ethnicity, free/reduced lunch status, handicapping conditions), and data can be disaggregated by these factors. Although most of the schools in the system have Reading First grants, there are a number of non-Reading First schools also using the system, and we expect that number to increase each year.

We envision that data in the PMRN will be used to support at least two types of research studies: (a) archival studies that will ask questions about relationships among variables (both concurrent and predictive), as well as factors associated with change in performance at the classroom, school, and district level; and (b) studies that use the data to assess outcomes from planned interventions or to study relations between student outcomes and other variables that might be assessed. This latter type of research is exemplified in a series of studies recently submitted in a grant proposal by Dr. Roehrig that examines teacher quality variables in relation

to student outcomes. Additionally, data from the PMRN can be used for psychometric analyses (e.g., examining the performance of items across different subgroups of students).

Assessment Development. With the emphasis on reliable and valid assessments to identify children struggling to acquire early reading skills that is part of Reading First, there is an urgent need to develop more efficient forms of assessment. FCRR is currently engaged in two long-term test development projects. One project is concerned with developing a computer adaptive test of early reading development that could be used for screening and progress monitoring of early reading growth (grades K-3). The other project focuses on development of a computer adaptive diagnostic test for students in grades 4-12. This latter test would be used to help provide diagnostic information for students who have struggled to achieve grade level standards on Florida's reading accountable examination, the Florida Comprehensive Assessment Test (FCAT). On both of these projects, there will be opportunities for fellows to learn about item development, applications of item response theory to item selection, development of computer adaptive algorithms, and test validation.

Performance on Florida's High-Stakes Assessment. FCRR is in the middle of a series of large-scale studies to examine the reading, language, and cognitive skills that are most important to predicting performance on the FCAT. The FCAT reading test is a measure of reading comprehension that contains demanding texts and places a special emphasis on student's ability to engage in complex thinking about them. We have already completed data collection for one study of 600 children at grades 3, 7, and 10 that included students randomly sampled across the full range of ability. Our next study will focus on students who have performed poorly on the FCAT to more fully understand their particular difficulties with the test at different ages. We hope that this series of studies will become a model to other states as we seek to understand more fully the construct of reading comprehension and the way it is measured by various state level reading accountability measures. These studies should also inform educators and policy makers about the full range of instructional challenges involved in helping every child achieve grade level standards on measures of complex reading comprehension.

School Improvement Studies. Increasingly, FCRR is being asked to participate in evaluations of new reading interventions that are being implemented in Florida's schools. This past year, for example, we carried out a random assignment study of an intervention for 9th grade students that involved paraprofessionals and volunteers implementing a systematic reading program. The initial results are promising, but they are not sufficiently strong to warrant wide spread use of this program at the present time. As with last year's study, we expect that this evaluation work will be funded by the State of Florida as part of the cost of any tryout of new instructional programs. Our goal is to work with schools and providers to develop the most rigorous designs possible and our standard will be random assignment studies. Over time, this should lead to a new awareness within the educational community about both the feasibility and the desirability of this type of research as a prelude to broader funding of specific initiatives. We also expect to develop considerable expertise in ways to facilitate random assignment studies within complex school environments.

Universal Preschool Standards. FCRR also is actively involved in helping the State of Florida develop sound educational policy for its constitutionally mandated universal preschool initiative. Both through basic and applied research on preschool instructional strategies and curricula (Drs. Lonigan, Schatschneider, and Hassler), and through working actively in the policy arena (Dr. Lonigan and Dr. Beth Phillips, one of our postdoctoral fellows) we hope to help Florida develop both policies and practices for its state supported preschools that reflects the

best information we can provide from research. At the local level, FCRR is helping the local preschool coalition develop evidence-based guidelines for helping centers choose curricula and professional development strategies. As above, FCRR is working with the local preschool coalition to develop and conduct a randomized evaluation study of curricula and professional development for low performing centers.

Other Ongoing FCRR Projects. Because of its role within the State of Florida at the intersection of research and policy, a number of FCRR's ongoing responsibilities can provide learning opportunities for fellows in terms of the application of research to policy and understanding the types of questions of use to educators. For example, FCRR is charged with writing and publishing reviews of literacy instructional programs at the pre-k, elementary, and secondary level. These reviews examine both the content, instructional strategies, and organization of the programs as well as whatever research is available to support their use with specific populations. Dr. Phillips has been involved in helping write the research portion of these reviews, and we would expect opportunities for fellows to be involved in this if they desired. FCRR is also responsible to conduct one-day site visits to 10% of Florida's Reading First schools each year. The site visit includes classroom observations and structured interviews with school personnel in order to evaluate the extent to which they are implementing the major required features of the Reading First program in Florida. The site visits are designed to provide a first level evaluation of the quality of instruction being provided in Reading First schools. Fellows would have a chance to participate in several of these site visits as observers/recorders, and in so doing could begin to acquire a sense of several critical dimensions of school organization and teacher performance that can affect student outcomes.

Other Technical Support and Resources Available to Training Program. FCRR employees a full-time computer engineer who can provide support for computer set-up and trouble shooting, programming for web-based surveys and data collection, development of digitized video applications, and set up and execution of teleconferencing applications. In addition, FCRR has two other staff who have high level expertise in computer applications and trouble shooting. FCRR has video production facilities, including equipment to digitize, edit, and produce high-quality video for training and other research purposes. FCRR has approximately 20 portable computers that can be used for data collection in the field, and FCRR has site licenses for all the major word processing, presentation, and data management and analysis applications (MS Word, Excel, PowerPoint, SPSS, SASS). FCRR maintains a large on-site library of journals and books related to reading research as well as a large library of standardized assessment and curricula materials. FCRR will provide fellows with office and research space as well as necessary office equipment, including computers. All of FCRR's space has wired or wireless Internet access to support routine office and research activities.

Learning Systems Institute

The Learning Systems Institute (LSI) is an interdisciplinary organizational unit of FSU dedicated to bridging the gap between research and practice in education and training. LSI's mission is to develop practical and workable solutions in education and training based on research, with a focus in three primary areas: (a) Improving public education through major educational reform at the state and national levels, (b) International development related to improving educational systems by using appropriate technologies, and (c) Designing, developing and implementing performance support systems. FCRR is administratively housed in LSI, which is directed by Dr. Laura Hassler, a program faculty member. LSI will provide bookkeeping and accounting services for the project and administrative support and oversight.

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Dr. Chris Lonigan
Department of Psychology and
Florida Center for Reading Research
Florida State University
Tallahassee, FL 32306

May 22, 2004

Dear Chris,

I am very pleased to write this letter of support for the IES Predoctoral Interdisciplinary Research Training program application you are preparing. This is exactly the kind of project the Florida Center for Reading Research was created to support. As you know, one of the key elements of our mission is to conduct both basic and applied research on educational issues that will provide information to help solve some of the educational problems we currently face in this country. We are actively working with the State of Florida to implement research based strategies in reading at both the elementary and secondary level, and I see that role increasing significantly as we are successful in our current endeavors. Based on the feedback I have recently received concerning the large study we conducted of the Florida Comprehensive Assessment Test, we will also be asked to participate in other state level research to help guide policy and practice, and we currently have two additional studies of the FCAT in the planning stages.

We would welcome the IES fellows at the Center, and we can provide the space and support that you have outlined in the proposal. With the recent allocation of permanent funding from the legislature, we will have a very stable faculty base at the center, and anticipate being able to expand that base by three more faculty within the next two to three years. The allocation also provides money for discretionary research projects that would provide very good training experiences for fellows.

I look forward to working with you to develop an outstanding pre-doctoral training program should we be successful in obtaining this training grant.

Sincerely,

Joseph K. Torgesen
Professor and Director



The Florida State University
Tallahassee, Florida 32306-1280
College of Arts and Sciences
Office of the Dean
(850) 644-1083

May 22, 2004

Prof. Chris Lonigan
Department of Psychology and
Florida Center for Reading Research
Florida State University
Tallahassee, FL 32306

Dear Prof. Lonigan,

I am pleased to write this letter of support for the IES Predoctoral Interdisciplinary Research Training program application you are preparing. The College of Arts and Sciences is keenly interested in attracting very high quality graduate students who will be trained by faculty in the Department of Psychology and other departments in the University to conduct scientifically sophisticated research related to issues in education. As you know, a program such as this one also fits very nicely with our interest in expanding the number of graduate students being served in our programs.

The generous stipends awarded to fellows in this program, as well as the support and training environment provided at the Florida Center for Reading Research sounds like a winning combination for a successful training program. You have my full support as the Dean of the College in proceeding with this application, and I will do all I can to assist you in the development of an outstanding program should you be awarded the grant.

Best wishes for success in this endeavor,

Sincerely,

Donald J. Foss
Dean and Professor



Florida State UNIVERSITY

Tallahassee, Florida 32306-4450

*Richard C. Kunkel, Professor & Dean
Office of the Dean
College of Education
236 Stone Building*

*Voice: (850) 644-6885
FAX: (850) 644-2725
E-Mail: kunkel@coe.fsu.edu*

May 24, 2004

Dr. Chris Lonigan
Department of Psychology and
Florida Center for Reading Research
Florida State University
Tallahassee, FL 32306

Dear Dr. Lonigan:

I am pleased to write this letter of support for the IES Predoctoral Interdisciplinary Research Training program application you are preparing. The College of Education is most interested in “teaming” with the College of Arts and Sciences and other colleges in the creation of an outstanding training program for educational scientists. This initiative fits very nicely within our overall efforts to increase the research focus in the College, and we would welcome graduate students who are interested in obtaining high quality training in educational research on significant problems. This program also fits very nicely with our interest in expanding the number of graduate students being served in our programs.

We are also excited by the prospect of strengthening our ties and collaboration with the Florida Center for Reading Research, which has been an extremely productive relationship to this point. I cannot imagine a more suitable setting to support such a training effort as the research center. I know that the faculty in our College who are affiliated with the center find it a most productive environment to work within, and I expect that the graduate fellows will also. You have my full support as the Dean of the College of Education in proceeding with this application, and I will do all I can to assist you in the development of an outstanding program should you be awarded the grant.

Best wishes for success in this endeavor.

Sincerely,

Richard C. Kunkel
Professor and Dean



The Florida State University
Department of Psychology
Tallahassee, Florida 32306-1270
850/644-2040
850/644-7739 (fax)

May 26, 2004

Dr. Chris Lonigan
Department of Psychology and
Florida Center for Reading Research
Florida State University
Tallahassee, FL 32306

Dear Chris,

I am delighted to write a letter of support for the IES Predoctoral Interdisciplinary Research Training program application you are preparing. Psychology has a long tradition of doing research on matters of relevance to the field of education and the Florida Center for Reading Research (FCRR) is a wonderful example of the power of bringing researchers in psychology and education together to solve the most pressing educational problems of our time. I cannot think of a setting that is more appropriate for training the next generation of educational researchers than FCRR. You and others at this center are outstanding mentors for research training and the types of research projects that are being done through the center are ideal for teaching students to conduct interdisciplinary research in education.

The Department of Psychology is fortunate to have close ties to FCRR. If you were awarded this training grant, I would welcome the opportunity for graduate students in our department to participate. The proposed training program fits well with this department's emphasis on research training and I believe that the availability of this training for incoming graduate students would increase our success in attracting the best and brightest students to our department.

As the Chair of the Psychology Department, I strongly support your application and will do all that I can to assist you in the development of this training program.

Sincerely,

Janet A. Kistner
Professor and Chair



Florida State UNIVERSITY

Tallahassee, Florida 32306-4453

*Department of Educational Psychology and Learning Systems
College of Education
307 Stone Building*

Voice: (850) 644-4592
FAX: (850) 644-8776

May 17, 2004

To Whom it May Concern,

I fully support the involvement of Educational Psychology and Learning Systems faculty and PhD students participating in the Predoctoral Interdisciplinary Research Training Program in the Education Sciences. As Chair of the Department of Educational Psychology and Learning Systems in the College of Education at Florida State University, I believe this training program will be beneficial for the faculty developing the program and for the students who take part in it.

Sincerely,

Frances Prevatt, Ph.D
Department Chair



The Florida State University
Tallahassee, Florida 32306-1200

Department of Communication Disorders

*L.L. Schendel Speech and Hearing Clinic
107 Regional Rehabilitation Center
(850) 644 - 2238 • FAX (850) 644-8994*

May 26, 2004

Chris Lonigan, PhD
Dept of Psychology
Florida State University
Tallahassee, FL 32306-1270

Dear Dr. Lonigan:

I was thrilled to hear that you were heading up the effort to submit an application for an Interdisciplinary Research Training Program in Educational Sciences. I am aware of the outstanding work going on at the Florida Center for Reading Research, because of the involvement of a number of our doctoral students. The focus on preparing doctoral students to contribute high quality research that is educationally relevant is a laudatory activity, altogether consistent with the efforts in the Department of Communication Disorders. In particular, the research activities of Drs. Goldstein and Woods are highly relevant to this program. They have made significant strides to facilitate research efforts in the public schools through their Professional Development School Partnerships. Furthermore, their interest in improving language and literacy outcomes in high risk populations and children with special needs should be a valuable addition to the work of the impressive cadre of faculty that you have assembled for this program.

I wish you the best of luck with your grant application. We look forward to the future involvement of our doctoral students and faculty members in this program.

Sincerely,

Richard Morris, PhD
Department Chair



May 25, 2004

Dr. Chris Lonigan
Department of Psychology and
The Florida Center for Reading Research
Tallahassee, Florida 32306

Dear Dr. Lonigan:

I am very pleased to write this letter of support for the IES Predoctoral Interdisciplinary Research Training program application on behalf of faculty and staff in the Learning Systems Institute at Florida State University. Given our mission as multi-disciplinary research unit focused on improved human performance, and our emphasis on systematic PreK-12 research, the opportunity to participate in developing and offering a training program for graduate students who will undertake this kind of work is welcomed. We have a number of systematic studies underway and coordinate a multi-university project focused on working with representative s from stakeholder groups to develop a PreK-16 reading, mathematics and science high-priority research agenda for Florida. In addition to the feedback from the proposed IES-PERT advisory group, this work will guide the fellows in developing research projects that will address critical issues for learners in our schools.

The Learning Systems Institute will gladly provide the administrative and accounting support services to the program as well as other types of assistance required to ensure this program is successful. On a personal note, after spending twenty-five years as a teacher, assistant principal and principal, it is very exciting to participate in an effort that will result in addressing the intractable problems encountered in our schools. I look forward to working with you, and the fellows.

Best regards,

A handwritten signature in cursive script that reads "Laura Hassler".

Laura Hassler
Director and Associate Professor

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May 21, 2004

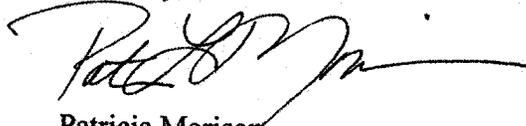
Christopher Lonigan
Associate Director
Florida Center for Reading Research
Department of Psychology,
Florida State University,
Tallahassee, FL 32306-1270,

Dear Dr. Lonigan:

I am writing to indicate that the Center for Education at the National Research Council (NRC) of the National Academies would be pleased to sponsor a graduate student from Florida State University as an NRC intern. If your program can provide the stipend, we would provide an interesting internship experience here at our offices in Washington, D.C. for a student who is interested in learning about the applications of education research to policy issues.

We look forward to the opportunity to work with you on developing such an internship program.

Sincerely,



Patricia Morison
Associate Director
Center for Education

Appendix B

Table 1. *Demographics on incoming students, qualifications at time of admission to program, and numbers of students graduating program over past three years in Departments of Psychology, Special Education and Vocational Rehabilitation, Communication Disorders, and Educational Psychology and Learning Systems*

	Psychology (excludes neuroscience students)	Special Education & Vocational Rehabilitation ¹	Communication Disorders	Educational Psychology & Learning Systems
Number of Students	37	112	17	13
Gender (% female)	62	76	82	39
Ethnicity				
% Caucasian	78	58	76	54
% African American	11	21	18	8
% Other Ethnicity	11	21	6	38
Average GRE (V & Q)	1238.65	1135.71	1060.67	1118.30
Average UG GPA	3.75	3.15	3.65	3.76
Number of Ph.D.s	24	16	10	10
Median Time in years to completion of Ph.D.	6	4	3	4

Note. Data on students in psychology excludes neuroscience students who are admitted in a joint doctoral program with biology; GRE = Graduate Record Exam, Total Score (sum of Verbal and Quantitative scores); UG = undergraduate; GPA = grade point average (scale of 4). ¹Overall demographics for Special education includes both masters and doctoral students.

Appendix C

Description of Advisory Committee

Mary Laura Openshaw, Director, Just Read, Florida! In early 2002, shortly after Governor Bush issued an executive order to establish Florida's first intensive statewide reading initiative, Ms. Openshaw was named Director of Just Read, Florida! In this capacity, she manages an extensive program that entails the administration of Reading First in Florida (\$300 million, six-year, Federal K-3 reading program). However, Just Read, Florida! is a comprehensive K-12 reading initiative, funded by the Florida Legislature, and it plays a key role in the creation of Florida's statewide reading policy and the crafting of likeminded legislation. Ms. Openshaw steers a staff of eight and works closely with the Florida Center for Reading Research at FSU, public school districts, principals, teachers, and reading coaches to implement research-based reading policy in an endeavor to create a seamless K-12 reading program throughout the state. She is directly responsible as the point-person in crafting the Governor's long-term vision for reading achievement among Florida's children. Before becoming the Director of Just Read, Florida!, Ms. Openshaw was the Director of the Division of Public Schools in Florida's Department of Education, and before that, Ms. Openshaw was an award-winning high school history teacher for five years in Mississippi and Texas.

Bill Montford, Superintendent, Leon County Schools, Florida. Mr. Montford is currently in his 8th year as superintendent of schools for a district considered medium in size (33,000 students) in Florida. Under his leadership, student performance in reading, writing and mathematics has risen steadily. The spring 2004 reading scores for 10th graders place Leon County at the top of all districts in Florida. For every grade level tested in every subject tested, Leon County students' performance places the district in the top three for like-sized and larger districts. Mr. Montford was the state's Superintendent of the Year in 2001 and president of the Florida Association of School Superintendents in 2000. Prior to becoming a superintendent, Mr. Montford served as a high school principal for 20 years, an assistant principal for five years and a middle school mathematics teacher for two years. Mr. Montford has a bachelors degree in Mathematics Education and a masters degree in Administration and Supervision.

David Mosrie, Ph.D. Chief Executive Officer, Florida Association of District School Superintendents (FADSS). Prior to becoming CEO of FADSS, Dr. Mosrie served as the Associate Executive Officer of FADSS and the Director of the Division of Public Schools with the Florida Department of Education. His other experiences included superintendent of schools in St. Lucie County, area superintendent in Brevard County, high school principal, middle school principal, assistant principal, and high school dean of students. Before his administrative career, Dr. Mosrie was a science teacher and chemistry teacher in both Brevard and Alachua County schools. Dr. Mosrie earned a bachelors degree in chemistry, a masters degree in Science Education, and a Doctorate in Education Administration from the University of Florida. From 1978-1981, Dr. Mosrie was an Assistant Professor & Coordinator of the Teacher Corps Project administered through the University of North Florida. He also has been an adjunct professor in Educational Leadership at Florida State University.

Simmie A. Raiford, Ph.D., Chief Legislative Analyst for the Council on Education Policy Research and Improvement (CEPRI). Dr. Raiford's role at CEPRI involves researching issues related to K-12 educational policy and providing policy analysis for the Florida legislature. Prior to working at CEPRI, Dr. Raiford served as Visiting Professor at Florida State University in the Department of Educational Leadership and Policy Studies, where she earned a Ph.D. For 17

years prior to coming to Florida State University, Dr. Raiford served in a number of positions in Florida public school districts. She began her career in 1983 as a fifth grade teacher and went on to serve as a professional development resource teacher. She entered administration in 1991 as an assistant principal and continued in administration as the director for staff development in St. Augustine (St. Johns County), Florida, and as an elementary principal in Jacksonville (Duval County), Florida. She holds professional certification in Elementary Education, Early Childhood Education, Reading, and Educational Leadership.

Bob Smith, Executive Director of North East Florida Educational Consortium (NEFEC). As Executive Director of NEFEC, a consortium of 14 member school districts in northeast Florida, Mr. Smith's primary responsibility is the overall administration of programs, projects, and services for member districts. In addition to the administration of this service agency, there is the fiscal function relative to individual projects and the overall operation of the Consortium. As executive director, he is directly responsible to the NEFEC Board of Directors comprised of the superintendents of each member school district. Mr. Smith has a bachelors degree in Economics/Business Administration and a Masters degree in Education Administration and Supervision; his areas of expertise include agency collaboration, program design and development, school improvement, data analysis, budgeting, finance, vocational education, adult education, career education project management, and grant writing.

Frances Gupton, Coach, Partnership to Advance Student Success (PASS). Ms. Gupton serves as a coach of 8 under-performing schools, 7 in Duval County, and 1 in Leon County. As a coach, Ms. Gupton uses her experiences and skills to train principals and teachers in the use of data as a tool for school improvement. She is also a member of the Applied Data Analysis for Principals and Teachers (ADAPT) research project at the Learning Systems Institute at FSU. Finally, Ms. Gupton works as a consultant for the Southern Regional Educational Board as a certified module trainer, training school teams using the curriculum leadership modules developed by SREB. She is the former principal of West Riverside Elementary School in Duval County, an urban school in Jacksonville, FL., and a former primary resource teacher (5 years), and elementary school teacher (12 years). During Ms. Gupton's tenure as principal, WRES was one of the seven original schools and the only school in Northeast Florida chosen to participate in the PASS program. She worked with faculty and staff, training them in using data to improve student achievement, moving the school's state grade from "D" to "B." Ms. Gupton has a Master's Degree in Early Childhood and Educational Leadership.

Fred Gainous, Ed.D., President, Florida A&M University. Dr. Gainous became the ninth president of Florida A&M University, a historically black college, in July 2002. Prior to that time, he served as Chancellor of the Alabama College System for 14 years. He also served as associate vice president for educational and student services at St. Petersburg Junior College and as assistant commissioner for Community Colleges and Vocational Education at the Kansas State Department of Education. Dr. Gainous was selected to participate in the American Association of Community Colleges' Fifth Annual National Leadership Academy, for the Shirley B. Gordon Award of Distinction from Phi Theta Kappa Honor Society, and was honored in the 15th anniversary edition of *Black Issues in Higher Education* as one of 15 influential state and federal appointees from across the nation for contributions in equity in higher education. He earned an undergraduate degree in agriculture from FAMU and both his master and doctorate in education from the University of Florida.

Appendix D

Descriptions of Additional Ongoing Research of Program Faculty

- *Prevention of Reading Disabilities* (Lonigan; funded by NICHD; 1999 - 2005). This project involves a randomized efficacy study of components of an early literacy intervention. In a theoretically motivated factorial design, the study investigates the effect of oral language, phonological awareness, and print knowledge interventions both alone and in combination on preschool children's pre-literacy skills as well as their later reading skills.
- *Understanding/Preventing Math Problem-Solving Disability* (Schatschneider; funded by NICHD; 2003 - 2007). This project, conducted in collaboration with Lynn Fuchs and Doug Fuchs in Nashville, is designed to investigate the development and remediation of math difficulties. Using a RCT design, 20 schools are randomly assigned to either one of three treatment conditions for children identified as having difficulty in math problem solving or a control condition.
- *Influences on early reading: A twin study.* (Schatschneider; funded by NICHD; 2002 - 2006). This project, conducted in collaboration with Steve Petrill at Penn State University, is a behavioral genetics project that is examining environmental factors that influence reading development in a set of identical and fraternal twins.
- *Effects of Group Size and Teacher Experience/Training on Reading Outcomes for First Grade At-Risk Students* (PI: Torgesen, funded by NICHD). This project examined the effects of receiving preventive reading instruction in groups of either 3 or 5 students delivered by either a well-trained experienced teacher or by a well-trained and carefully selected paraprofessional. Instruction was delivered through a highly structured program that was well articulated with the comprehensive core reading curriculum being used in the classroom. Using a RCT design, approximately 250 students were assigned to one of four instructional conditions or a "treatment as usual" control condition.
- *Preschoolers' Reading-Related Phonological Processing* (PI: Wagner; funded by National Institute of Child Health and Human Development; 2000 - 2005). This study used confirmatory factor analysis and structural equation modeling to test alternative models of the nature of preschoolers' reading-related phonological processing abilities and their potential causal relations with reading. A longitudinal correlational design is used that allows for potentially bi-directional causal influences and covaries auto-regressive effects.
- *Acquisition of Long-term Working Memory as a Means for Skilled Performers to Maintain Situation Awareness Under Stress* (PI: Hassler; funded by the Office of Naval Research; 2004 - 2005). This project examines whether long-term working memory-based skills can be acquired to provide maintained situational awareness under stress. A particular focus of the project is to identify interventions that are likely to reduce stress-induced decrements in situation awareness during performance. Studies will examine the effect of training programs on situation awareness maintained under stress with participants with different levels of skill. The primary goal of these investigations is to identify and design principles that can guide improved training of skilled military performers, such as pilots, so they can better maintain situation awareness under the stressful conditions of combat missions.

- Study, Evaluation, and Proof of Concept Development in Support of the Naval Education and Training Command Revolution in Training, Training Technology Infusion, and Integrated Learning Environment Initiatives (PI: Hassler; funded by the U.S. Department of the Navy; 2003 - 2005). Driven by the “Presidential Initiative for Technology,” and as the Navy's “change agent” for the Revolution in Training (RIT), the Naval Education and Training Command has multiple technology infusion initiatives underway to increase the efficiency and effectiveness of Department of the Navy training programs. This grant includes six projects in support of the RIT. Among other objectives, the projects are designed to evaluate the effects of different instructional delivery systems, outcomes for distance learning, how characteristics of online-learners influence educational outcomes, and the impact of “off the shelf” software.
- *Teacher Expertise: Teacher Decision-Making for Retention or Promotion of Students* (Roehrig). The purpose of this project is to identify the factors teachers take into consideration when making retention/promotion decisions for their students, and evaluate the relation of these factors to students’ growth in reading achievement in subsequent years.
- *Home Literacy Survey of Families of Young Children with Disabilities* (Al Otaiba; funded by FSU Research Foundation). The purpose of this project is to use an online survey to describe the home literacy environments of young children with disabilities. The survey has been featured on the National Down Syndrome site.
- *Code-based Tutoring in English for English Language Learners and their Preservice Teacher/Tutors* (Al Otaiba; funded by FSU Research Foundation). The purpose of this study is to examine the effects of a structured research-based intervention in English on the reading skills of children who are English Language Learners and also to examine the growth in knowledge of language structure for preservice teachers.
- *Method of Long-Term Equating of Mixed-Format Assessments* (Tate: funded by the Florida Department of Education). The description of achievement trends over time for educational accountability requires careful equating of the different test forms developed each year. Equating methods originally developed for traditional “objective” tests (i.e., test using true-false and multiple choice items) are not appropriate for the newer assessments that also include various performance or constructed response items. This research examines the potential danger of using traditional equating methods, and it identifies a new approach to equating for mixed-format tests, and studied the precision of this equating.
- *Applications of Hierarchical Linear Modeling (HLM)* (Tate: funded by the Florida Department of Education). This relatively new modeling approach for nested data has been used for the estimation of “value-added” school effects in accountability programs. This research applies these procedures to assessment data from Florida to compare HLM school effects with those based on other approaches.
- *Effects of Embedding Emergent Literacy Intervention within Repeated Book Reading for Preschoolers with and without Language Delays* (Goldstein). This study is investigating the efficacy of explicit phonological and print awareness interventions embedded within repeated shared book reading in preschool classrooms. Weekly measures are used to evaluate changes in rhyming and print awareness skills. In addition, the learning of new vocabulary heard 3 times vs. 12 times weekly is assessed through multiple measures of expressive and receptive vocabulary acquisition.

- *Effects of Vocabulary Stimulation on Basic Concept Development in Preschool and Kindergarten Children in Low-Income Schools* (Goldstein). This project is investigating the effects of training teachers and paraeducators to embed vocabulary instruction into classroom activities. New basic concepts are targeted weekly. Improvements on the *Boehm Test of Basic Concepts* have been associated with embedded intervention. Subsequent to development of the training and implementation procedures within quasi-experimental studies, randomized control investigations are planned with classrooms as the unit of analysis.
- *Effects of Embedding Vocabulary Instruction During Reading of Open Court Decodable Books in Independent Learning Centers* (Goldstein). Listening centers were established with tape recorded instruction embedded within reading practice sessions. This investigation is comparing the effects of independent activities that focus on decoding and phonological awareness skills with and without instruction on new vocabulary. Intervention is delivered to triads of kindergarten students randomly assigned to the two treatment conditions. Effects on vocabulary acquisition are assessed weekly in addition to pre- and post-assessments of decoding and phonological processing skills.