HARDING
U N I V E R S I T Y
INSTITUTIONAL REVIEW BOARD

Request for Exemption from IRB Review

Date: April 28, 2010

Proposal Number:
(to be assigned by IRB administrator)

Title of Project: Effects of Poverty on Math and Literacy Achievement in Arkansas

Name and contact information for the Principal Investigator: Karen C. Smith email: █████████████

I request exemption from IRB approval for my project. The basis upon which I claim my exemption is (mark one):

☐ (1) Research conducted in established or commonly accepted educational settings, involving normal educational practices, such as
    (i) research on regular and special education instructional strategies, or
    (ii) research on the effectiveness of or the comparison among instructional techniques, curricula, or classroom management methods [§46.101(b)(1)].

☐ (2) Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior, unless:
    (i) information obtained is recorded in such a manner that human subjects can be identified, directly or through identifiers linked to the subjects; and
    (ii) any disclosure of the human subjects' responses outside the research could reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, or reputation [§46.101(b)(2)].

☐ (3) Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior that is not exempt under paragraph (b)(2) of §46.101, if:
    (i) the human subjects are elected or appointed public officials or candidates for public office; or
    (ii) federal statute(s) require(s) without exception that the confidentiality of the personally identifiable information will be maintained throughout the research and thereafter [§46.101(b)(3)].

☒ 4) Research involving the collection or study of existing data, documents, records, pathological specimens, or diagnostic specimens, if these sources are publicly available or if the information is recorded by the investigator in such a manner that subjects cannot be identified, directly or through identifiers linked to the subjects [§46.101(b)(4)].

☐ (5) Research and demonstration projects which are designed to study, evaluate, or otherwise examine:
    (i) Public benefit or service programs;
    (ii) procedures for obtaining benefits or services under those programs;
    (iii) possible changes in or alternatives to those programs or procedures; or
    (iv) possible changes in methods or levels of payment for benefits or services under those programs [§46.101(b)(5)].

☐ (6) Taste and food quality evaluation and consumer acceptance studies:
    (i) if wholesome foods without additives are consumed or
    (ii) if a food is consumed that contains a food ingredient at or below the level and for a use found to be safe, or agricultural chemical or environmental contaminant at or below the level found to be safe, by the Food and Drug Administration or approved by the Environmental Protection Agency or the Food Safety and Inspection Service of the U.S. Department of Agriculture [§46.101(b)(6)].

I have attached a one-page synopsis of my project.

Signature of Principal Investigator _____ Date _____

HARDING
Institutional Review Board
Research Review Request

Title of Proposed Project: Effects of Poverty Funding on Literacy and Math Achievement in Arkansas

____ Faculty Initiated   __X__ Student Initiated

Faculty Advisor: Dr. Kieth Williams

Faculty Advisor Signature _____

Principal Investigator: Karen C. Smith   **Phone:** ███████████
Email: ███████████████████████

Department/Affiliation: College of Education/Educational Leadership
Date of PI training: April 10, 2010

Proposed Start Date of Study: May 15, 2010   **Expected Completion Date:** October 1, 2010
This study will be conducted off campus.
Is this project being funded by an outside agency? No

1. Purpose of Study

The purposes of this study were three-fold. First, the purpose of this study was to determine by grade level the effects of four levels of NSLA funding (NSLA Funding Level 1a versus NSLA Funding 1b versus NSLA Funding Level 2 versus NSLA Funding Level 3) on districts' literacy achievement for grades 4, 6, and 8 in Arkansas Public Schools. Second, the purpose of this study was to determine by grade level the effects of four levels of NSLA funding (NSLA Funding Level 1a versus NSLA Funding 1b versus NSLA Funding Level 2 versus NSLA Funding Level 3) on districts' math achievement for grades 4, 6, and 8 in Arkansas Public Schools. Third, the purpose of this study was to determine what percentage of expenditures was allocated in the 11 categories identified for the Arkansas Public School districts by the four funding levels.

2. Significance

The results of this study will benefit Arkansas School Districts, members of the Arkansas General Assembly, and students in Arkansas Public Schools. Information gathered from this study will provide lawmakers and school personnel with data on the impact of NSLA funding on student achievement. The study will also provide these parties with information on whether or not there are differences in student achievement based on how NSLA funds are spent. Since NSLA funds are relatively new to the state and there has not been any research specifically including NSLA funds, this

information could prove helpful to Arkansas legislators in making decisions to continue to appropriate NSLA funds in either the current status or to amend legislation regarding how districts can spend NSLA funds. Research from the study could show that some NSLA expenditures are more beneficial at raising student achievement than others.

Depending on what the research shows, another benefit of the study could be to provide information to school districts to help aid in making decisions on how to spend NSLA funds locally. For instance, if certain expenditures are shown to have minimal benefits in affecting student achievement, personnel from school districts might reduce or completely cut out that expenditure in the future and funnel the money from that expenditure into an expenditure that has shown to be more beneficial in raising student achievement.

Educators from other states could also benefit from this study. Currently, few states include some type of categorical fund for low socio-economic students; however, there is an increasingly number of states that are involved in litigation over funding formulas. Research from this study could provide them with information regarding the relative benefits of some type of additional funding for low socio-economic students.

3. Design

A causal-comparative, non-experimental design was utilized in this study. The independent variables for the first two statements of the problem were the four levels of NSLA funding (NSLA Funding Level 1a versus NSLA Funding 1b versus NSLA Funding Level 2 versus NSLA Funding Level 3) and the three grade levels (grades 4, 6, and 8). The dependent variable for the first statement of the problem was the measured literacy achievement for the students in the districts sampled. The dependent variable for the second statement of the problem was the measured math achievement for the students in the districts sampled. For the third statement of the problem, descriptive statistics were used to determine what percentage of expenditures was allocated in the 11 categories identified for the Arkansas Public School districts by the four funding levels.

4. Subjects

A stratified random sampling selection process was used to choose participants for the study. First, all 244 public school districts in the state of Arkansas were divided according to their current NSLA Funding category. Note: There are actually three levels of NSLA funding. However, for the purposes of this study, the first funding level, which includes all districts up to 69% free/reduced lunch, was divided into two groups: all districts with up to 49% free/reduced lunch and districts with 50% to 69% free/reduced lunch. This created the four funding categories into which districts were divided. Second, two districts from each of the four NSLA categories were chosen randomly to

participate in the study. Third, from each of the eight districts chosen, 30 students were randomly selected in each of the three grade levels (grades 4, 6, and 8), respectively. Student achievement scores in literacy and math were collected for analysis.

5. Subject Confidentiality

Permission was obtained by the superintendents of each of the eight school districts to use their students' data. Identities of participating school districts and individual students were kept very confidential. Data were coded as follows: (a) districts were identified by level of NSLA funding and (b) students were identified only by district and grade level. No personal identifications were used. All data were on a secure computer, kept password protected, and will be deleted three years after the completion of this study. For the third statement of the problem, five districts were chosen randomly from each of the four funding categories, for a total of 20 districts. Identities of the 20 districts are confidential and no identifying information was used. No risk should be involved for subjects.

6. Informed Consent

Informed consent was not necessary, as this study utilizes extant data.

7. Instrumentation

The Arkansas Comprehensive Testing, Accountability, and Assessment Program's (ACTAAP) Augmented Benchmark Test (Arkansas Augmented Technical Manual, 2009) was used to measure the literacy and math achievement for the first two hypotheses in the study. Two components make up this test for grades 3-8: a criterion-referenced test (CRT) and a norm-referenced test (NRT). The CRT component focuses on establishing student performance levels and contains items specifically designed to align with Arkansas state education standards. The CRT component of ACTAAP is known as the Arkansas Augmented Benchmark Examination (AABE). The AABE is composed of custom-developed items and Stanford Achievement Test – Version 10 (SAT10) items that are aligned to the Arkansas Content Standards. An independent alignment study was conducted by Achieve to identify which items were aligned to the Arkansas Content Standards.

Data were collected on NSLA expenditures from the Arkansas Department of Education as derived from the financial section of the Arkansas Public School Computer Network (APSCN) for the 2008-2009 school year. The results from the ACTAAP Augmented Benchmark Test were compiled and appropriate statistical tests were conducted to accept or reject the hypotheses that were formulated. To address the first set of hypotheses, a 4 x 3 factorial analysis of variance (ANOVA) was conducted using NSLA level of funding (NSLA Funding Level 1a versus NSLA Funding Level 1b versus NSLA Funding Level 2 versus NSLA Funding Level 3) by grade level (4th versus 6th versus 8th) as the independent variables and literacy achievement as the dependent variable. To address the second set of

hypotheses, a 4 x 3 factorial ANOVA was conducted using NSLA level of funding (NSLA Funding Level 1a versus NSLA Funding Level 1b versus NSLA Funding Level 2 versus NSLA Funding Level 3) by grade level (4th versus 6th versus 8th) as the independent variables and math achievement as the dependent variable. To answer the third research question, four tables were created, one per funding level, with five districts that were randomly chosen from each level on each table listed in the horizontal rows and the expenditure categories listed in the vertical columns. The expenditure categories were divided into the following 11 areas: curriculum coordinators, academic coaches, teachers to reduce class size, nurses, social workers, bonuses, after school tutoring teacher salaries, technology equipment, materials and supplies, paraprofessional salaries, and other. By using the year-end expenditure reports from APSCN, expenditures were disaggregated into each of the 11 categories as a percentage of that particular category of the overall NSLA allotment for that district.

8. **Data Confidentiality**

Data collected electronically from the Arkansas Public School Computer Network (APSCN) or National Office of Research Measurement and Evaluation Systems (NORMES) will be password protected and will only be stored on the researcher's personal computer. Any data that is in hard copy form will be stored in a locking filing cabinet. Data will be destroyed after three years.