

## CAN STUDENTS LEARN ECONOMICS AND PERSONAL FINANCE IN A SPECIALIZED ELEMENTARY SCHOOL?

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Statistics from a number of surveys indicate there is a high rate of economic and financial illiteracy in the United States.<sup>1</sup> Several other studies have pointed out that problems related to the widespread lack of economic and financial understanding have serious consequences on the future economic well-being of many citizens.<sup>2</sup> For example, a report of the 2002 Governors Task Force concluded that money and financial problems are the number one cause of divorce, a leading cause of suicide, and a main reason for the increase in personal bankruptcies throughout the United States. However, economic and financial illiteracy is an acute problem in larger urban areas. About 10 million households are unbanked, meaning they have no relationship with a mainstream financial institution. The majority of these households are minority families centered in urban areas.<sup>3</sup> These households typically depend on less economically sound lending or credit choices such as check cashing outlets, short-term lenders, and rent-to-own stores for many of their financial services.

Financial and economic illiteracy may be traced to a lack of schooling in basic economic and financial principles. Alan Greenspan suggests that financial education should begin as early as possible and "improving basic financial education at the elementary level ... provide a foundation of financial literacy." Greenspan also believes "financial education is especially critical for populations that have been traditionally underserved by our financial institutions" and "strategies must be developed to overcome the education deficiencies that all too many young people have."<sup>4</sup> Unfortunately, most students in our nation's urban schools do not receive this basic economic education.<sup>5</sup>

This report discusses an evaluation of achievement scores in eco-

nomics and financial education of three public elementary schools in an urban setting. The purpose of the report is to illustrate the point that if you teach economic and financial principles to urban elementary children on a regular basis, the students may gain knowledge that will support them in daily financial decision making for the rest of their lives.

#### Economic and Financial Education and the Social Studies Curriculum

Economic and financial education is taught infrequently in the elementary grades in most school districts. This may, in part, be the result of an association of economic and financial education with the elementary social studies curriculum. Since social studies has not been a high priority in many schools, it is of little surprise that economic and financial education also draws little attention. Recent studies conducted in 2005 by the Center for Policy Studies and the American Youth Policy Forum found evidence of a narrowing of school curriculum subjects and topics as schools place a sharper focus on reading, mathematics, and standardized testing. Thus in many urban and public school districts social studies may not be taught regularly, and if taught at all, is usually rotated with science. Due to the limited exposure to social studies in general, the topics covered are also reduced and are often limited to instruction on history, geography, and civics. In addition, the typical structure of school curricular topics also tends to place economics within traditional high school curricula. In either case the need for economic and financial literacy in school-aged children is critically important in society due to the complexities of today's financial world. In most cases economics and financial education within social studies are not adequately covered in urban schools.

Social studies instruction, including economics and financial principles, can be guided by national, state, and local standards and benchmarks. Most states conduct standardized testing that include test items in economics, yet those items construct only a small portion of social studies scores, and most test scores generated in social studies are usually not used in overall school proficiency measures. Most urban schools face achievement gaps in other curricular topics that become the focus of the majority of daily instructional time. The focus on literacy in reading, writing, and mathematics dominates most reform in urban public school settings. Therefore, literacy in economics may possibly be thought to be less important when looking at language arts and mathematics standardized test scores. Yet for the population of children most urban public schools serve, it may be more important for students to obtain a solid financial education in school as they may not be able to glean the infor-

mation from other sources. Economics and financial instruction early on in schooling is critical, as the lack of educational resources urban students have to counteract misleading information from non-school sources or the deprivation of information due to mobility and trends in high-school drop-out rates make a strong argument that financial and economic education should permeate the curricula in urban elementary schools.

Greenspan's position that economic and financial education should be introduced early in the school curriculum is also supported by research that indicates elementary students are capable of understanding basic economic and financial concepts.<sup>6</sup> Introduction to economic and financial education in elementary grades is also supported by survey data that suggest that parents want such early experiences for their children.<sup>7</sup> And yet, most teachers, schools, and school districts fail to include basic economics and financial concepts in social studies instruction.<sup>8</sup>

### Purpose of the Study

This report presents an evaluation of achievement scores in economics and financial education of three public elementary schools in an urban setting. The purpose of the report is to test the notion that economic and financial principles can be learned by urban elementary students who enroll in a school that subscribes to economic and financial education as its specialized mission. This acquisition of knowledge may be accomplished in the face of all the other pressures placed on public schools including such factors as standardized testing and efforts to improve performances in other subjects such as language arts and mathematics.

If most public urban elementary schools face pressure for proficiencies, then most schools will offer instruction to meet those needs. In one unique case of an urban public elementary school in a Midwestern city, the pressure for proficiencies in economics and financial education were self-imposed based on a charter school partnership arrangement with the local Urban League. This report will focus on a comparison of achievement scores between three elementary schools in an urban setting. All of the schools are located in the urban inner-city area, are roughly the same size (i.e., 500-800 students at the 1-8 grade level) and have roughly the same student demographics (i.e., 80-90 percent of students are African American and over 70 percent of students receive special or reduced lunch as an indication of similar SES levels). What differentiates the schools are the emphases each school places on financial and economics education. Specifically, this study measured changes in survey responses of fifth and sixth grade students' (students with similar demographic

backgrounds) knowledge of basic economics and personal finance. Student responses to survey questions were measured over the course of one academic year during 2004. Student scores from a school that promotes economics and financial instruction were compared to two other schools that do not have a concerted economics and business efforts curriculum.

#### *Description of Schools Participating in Study*

The Milwaukee Urban League Academy of Business and Economics (MULABE) is a charter school in its fourth year of operation. The general mission of the school is to provide a strong academic program with emphasis on reading, mathematics, science, and social studies. The specialized mission of the school is to prepare students who have extraordinary knowledge and skills in business, economics, and personal finance. Students at MULABE experience a customized economic and personal finance curriculum on a daily basis throughout the school year. Members of the MULABE Board of Directors, the school's Business and Economics Coordinator, teachers, and parents have jointly designed the curriculum. The curriculum used by MULABE focuses on themes related to economics, personal finance and basic entrepreneurship. It includes materials published by the National Council on Economic Education (NCEE) (i.e. Master Curriculum Guides and Financial Fitness for Life). In the primary and elementary grades students learn basic skills such as basic banking, personal budgeting, and problem solving. In the upper grades students study more advanced business and finance topics, including basic investing and personal financial planning, economics, finance, and marketing.

School A is the second school used in the study. The school is in its fifth year of operation and also has a specialized charter mission, in this case to prepare students in the sciences. The science focus of the school permeates the curriculum, with additional emphasis on language arts, mathematics, and social studies. Although School A specializes in science, the social studies curriculum used at the school is a typical standards-based program offered by the school's private operator. Students at School A receive roughly two hours per week of instruction in the social studies.

School B is the third elementary public school used in the study. School B also belongs to the local urban public school district. School B does not have a specialized content area focus. The school provides an academic program that stresses language arts, mathematics, science, and social studies. School B uses a district adopted basal social studies stan-

dards-based text (i.e., *Harcourt Brace Social Studies*). Students at School B also receive roughly two hours per week of instruction in social studies.

## Methodology

### *Participants*

A total of 182 fifth and sixth grade students participated in the evaluation. One hundred and twenty fifth and sixth grade students from MULABE participated in the study. In addition, 25 fifth and sixth grade students participated from School A and 37 fifth grade students from the School B were subjects in the study (due to logistical considerations School B could not provide sixth grade students for the study).

### *Instruments*

Two measures were administered in a pre- and post-test manner at the beginning and end of the 2004 school year. The *Basic Economics Test* (BET) was a 29-item multiple-choice test. It was one of five nationally normed and standardized tests of economic literacy published by the NCEE.<sup>9</sup> The version of BET used in this study was designed to measure the economic understanding of intermediate elementary students in grades 5-6. The economic content of the BET is based upon the *Framework for Teaching Basic Concepts* of the *Master Curriculum Guide in Economics*.<sup>10</sup>

The *Personal Finance Test* (PFT) is a 30-item multiple-choice test designed to assess middle grade students' knowledge in personal finance. The PFT was designed based on selected items from currently used national curriculums supported by the NCEE (1997). The PFT test was previously piloted with elementary students and was found to be a sound measure of personal finance concepts.<sup>11</sup>

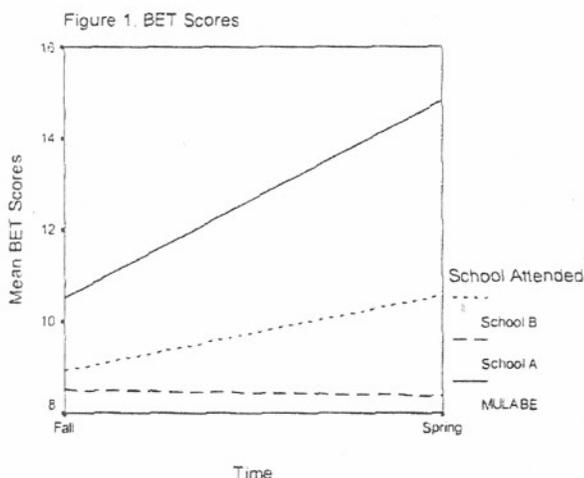
### *Analysis*

The general goal of this evaluation was to examine gains in student scores or improvements in student knowledge as measured during the course of an academic year. This evaluation sought to identify changes in student scores reflective of the school attended. To perform these tasks a multivariate analysis of variance (ANOVA) two-way subjects design was used. In addition, the magnitude of significant effects was estimated using the squared correlation ratio ( $\eta^2$ ) which is computed as the ratio of the sum of squares (SS) of an effect to the total SS. The ANOVA analysis of the data included a test of normality of data (i.e., does the data reflect a

“normal” distribution of scores) and determination of covariance with reliability correction (i.e., are there increases/decreases in student mean scores in pre-post testing on the various measures within the school and between schools). Post-hoc tests were used to determine the significant effects-Cohen effects size calculations (i.e. are the differences in scores between schools statistically significant and do these measures provide a meaningful indication of the improvement or deterioration in scores).

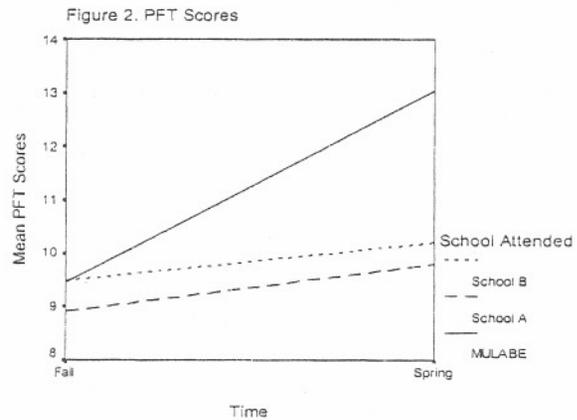
*Basic Economics Test*

The multivariate omnibus results revealed a statistically significant differences at the end of the school year between the three different schools:  $F(2,173) = 15.35, p < .0001, \eta^2 = .151$  (see Figure 1). Students at MULABE had higher mean scores at each time of testing than the students at School A and B. Further, the pairwise comparisons revealed significant differences across time for the fall and spring academic year at MULABE:  $F(1,174) = 132.28, p < .0001, \eta^2 = .433$  (Mean difference = 4.31); and School B:  $F(1,174) = 6.22, p < .05, \eta^2 = .014$  (Mean difference = 1.65). The results for School A was not statistically significant:  $F(1,174) = .023, p > .05, \eta^2 = .00$  (MD = .125). Thus, both MULABE and School B showed significant improvements in BET scores over time. Further, the pairwise comparison revealed MULABE students performed better at both the beginning and end of the school year than did the students in the other schools tested.



Personal Finance Test

The multivariate omnibus results of the PFT revealed a statistically significant differences at the end of the school year between the three different schools:  $F(2,173) = 6.90, p < .001, \eta^2 = .076$  (see Figure 2). Students at MULABE had higher mean scores at each time of testing than the students at School A and B. The pairwise comparisons revealed significant differences across time for the spring and fall academic year at MULABE:  $F(1,168) = 65.22, p < .0001, \eta^2 = .28$  (Mean difference = 3.59). The pairwise comparisons results for School B:  $F(1,168) = .807, p = .370, \eta^2 = .005$  (Mean difference = .714); and School A were not statistically significant:  $F(1,168) = .831, p = .363, \eta^2 = .00$  (MD = .875). Thus, only MULABE students showed significant improvements in PFT scores over time. As mentioned, the pairwise comparison revealed MULABE students performed better than the other schools, but this difference is noted only for the spring post-test. In other words, the MULABE students ended up performing better over the course of the year; however, they did not perform better than the other schools on the pre-test at the start of the school year.



## Discussion and Conclusion

The purpose of this study was to assess the impact of specialized economics and personal finance curriculum and instruction by measuring changes in students' knowledge of economics and personal finance. MULABE student scores on the surveys were compared to student scores from two other urban public schools that did not have a business and economics specialization. As expected, MULABE students consistently improved their scores on the surveys administered in this study. Results from both the BET and PFT surveys indicated the students from MULABE had statistically significant gains in their knowledge of economics and personal finance. Confidence in the performance of the MULABE students is strengthened when it is noted that similar changes did not occur among the students in Schools A and B. It is interesting to note that the PFT scores were similar among all groups at the start of the school year, and at the end of the school year MULABE students demonstrated the largest gains on the surveys. Although School B students also demonstrated post-test increases in mean scores on BET and PFT, the gains achieved by MULABE student mean scores was much greater.

This study, of course, faced certain limitations. The study did not include a direct correlation of MULABE student performance to the specific curriculum materials or the instructional strategies used in the economics and personal finance program. There was no attempt to analyze how informal curricular experiences, such as the MULABE Equity Bank or after-school programs like the Millionaires Club, may have affected student performance. There was no direct analysis of the curriculum or forms of instruction used the other schools in the study. Despite such limitations, the results of the study strongly suggest that there is something in place at MULABE that helps students to improve their scores on knowledge about basic economics and personal finance. The results from this study suggest that public elementary school educators who choose to include economics and personal finance on a daily basis can significantly improve student knowledge of these concepts.

The results of this study are of particular importance to urban school districts. Urban students often lack the resources to build a solid understanding of the basic principles of economics and personal finance. They often live in households that have no relationship with mainstream financial institutions and their financial future is seriously threatened by high levels of mobility (making banking relationships more difficult) and high drop-out rates (making economic and financial education unattainable).<sup>12</sup> Still, conventional urban school districts provide scant attention an understanding of the private sector works and how

individuals and families can participate in it.

MULABE operates in connection with local community groups. This connection helps establish an essential component in building bridges between organizations, institutions, and private businesses that strive to improve student economic and financial literacy in an urban setting. Schools such as MULABE that include a concerted focus on economics and financial instruction may be indicative of the efforts that are needed to promote the importance of financial education in today's world. Increasing familiarity with financial tools, technology, and links between schools and business are fundamental to improving the economic well-being of our society. "The success of such efforts will bear significantly on how well prepared our society is to meet the challenges of an increasingly knowledge-based economy."<sup>13</sup> MULABE students appear to be enrolled in a school that is preparing them to meet such challenges.

#### NOTES

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