
Gearing Up for Kindergarten
Project Report for United Way of Cass-Clay
Gearing Up for Kindergarten Expanded Research Project
Project Report #3

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Executive Summary

The United Way of Cass-Clay provided funding for an expanded research project on the *Gearing Up for Kindergarten* program to NDSU Extension Service and a research team at North Dakota State University in 2014. The scope of work for the project outlined a series of research projects associated with the program. This document provides an executive summary of the research findings associated with Research Project #3 in the scope of work.

Research Project #3

Analyze existing data with *Gearing Up for Kindergarten* program participants for variation in school readiness outcomes by key variables (such as demographics, gender, parent education status, program maturity, or other factors). Use findings to refine a model of the program.

Background

Gearing Up for Kindergarten is a family education opportunity for parents and their children who will be entering kindergarten in the following year. The *Gearing Up for Kindergarten* program provides families with an intensive educational experience that combines early learning activities for pre-kindergarten children with parent education opportunities for adults. The program operates using several delivery models. The most common program models thus far have been delivery of the program in two 8-session split semesters (fall and spring sessions), a single 10-session program, or two split 5-session programs (fall and spring sessions).

The goals of the program are:

- Children participating in *Gearing Up for Kindergarten* will show significant progress in being prepared to be successful in cognitive, social, emotional and practical domains as they enter kindergarten.
- Parents will increase their knowledge of child development, school readiness, and healthy parenting.

To further understand impacts of the program and differences in outcomes for participants, a series of analyses of existing program data were conducted. Data for these analyses were from six years of the *Gearing Up for Kindergarten* program, from 2006 to 2012. Respondents included 949 program participants and 112 controls (non-participants in the program). All respondents participated in the program in the state of North Dakota. Parents were the key informants about themselves and about their children. They completed questionnaires both before and after participating; the control parents completed questionnaires separated by a similar time interval.

Executive Summary of Key Findings

A brief summary of key findings from the study is included here. The survey findings for program participants over a six-year period were compared with the survey findings for a sample of non-program participants. Key findings from the study analysis are summarized.

- There were some demographic differences between the control and program groups: parents in the control group were more likely to reside in a large city, more likely to have higher levels of education, and were more likely to have sent their children to a child care center and to preschool. However, there were no differences between the groups on indicators of socioeconomic status (use of TANF, WIC, Medicaid, SNAP, or free and reduced-price school lunch).
- Adjusting for differences in preschool attendance and parent education, differences in outcomes over time were tested. The program group was assessed before beginning the program (“pre”) and at the completion of the program (“post”); the control group was assessed twice using a similar time interval. Results showed that the control group respondents scored at a more advanced level at pretest than did the program group and generally stayed more advanced at post-test.
- The children who participated in the program group showed significantly greater improvement over time on academic skills than did the children who did not participate (control group), as reported by parents.
- Parents of children in the program reported increasing the time they spent reading with their child, whereas control parents did not show any increase over the same period of time. Thus, the program assists parents in increasing their early literacy activities with children prior to kindergarten, while parents without the program did not show any increase in this area.
- Children who participated in *Gearing Up for Kindergarten* also improved at a greater rate than children outside the program in their familiarity with school, as reported by parents. These outcomes also held for children from families with low socioeconomic status.
- Within the group of children participating in the program, we compared post-test scores of those with low SES to the scores of all the rest. On all but one measure of child outcomes, there were no differences, meaning that the program had as strong an effect for those with low SES as it did for everyone else.
- To compare the program models, a comparison was made between outcomes for children in the differing program types. Participants in the 16-week program that was split into two 8-week sessions fared better on most outcomes than participants in the 10-week program that ran continuously. This is logical considering the fact that more time is spent with children in the 16-week program and there is more opportunity for program impacts to occur.
- The Gearing up for Kindergarten program appears to be effective at increasing the academic skills of children, making them better prepared to start kindergarten. The program is also related to increases in the amount of reading parents do with their children, which undoubtedly plays a role in the increased academic readiness seen in their children. The program also helps children become more familiar with the school before the first day of kindergarten. These gains in academic skills and parent reading were the same for those with low SES as for others. A key component of the program may be its focus on literacy skills and its promotion of parental involvement in guiding their child.

Measures Used in the Study

The evaluation process for the *Gearing Up for Kindergarten* project focused on gathering parent perceptions of their child's level of performance on a variety of indicators of school readiness. This evaluation tool was developed specifically for the *Gearing Up for Kindergarten* project, and is titled the Practical Parent Assessment for School Readiness. Children were rated on a 5-point scale by their parents in five key areas of development related to school readiness. Additionally, parents were asked to rate themselves on a number of key parenting practices related to preparing children for school. The following aspects of kindergarten readiness were measured by the parent questionnaire:

- Learning approach and effort
- Physical skills and abilities
- Social development and peer relations
- Emotional development and competence
- Basic academic skills
- Health and fitness
- Child school knowledge
- Parent school knowledge
- Child school familiarity
- Parent school familiarity

In addition, the following parental practices were measured by the parent questionnaire:

- Child developmental guidance
- Social guidance
- Reading guidance
- Emotional guidance
- Practical guidance

Review of Key Selected Findings from Study Participants

Parents were asked to complete the assessment process at the beginning of the program and also at the end of the program. This approach allows for comparison of parent perceptions of a child's readiness in key areas over time that may be affected by program participation. In addition, a comparison group that did not participate in the program was also recruited and evaluated on the same measures over a similar period of time. The first phase of investigation in the study assessed the similarity between the two groups with regard to basic characteristics. Next, the study examined if there were differences on program outcomes for participants in each of the two groups. If there are differences with regard to school readiness outcomes for those who participated and those who do not, they are likely due to participation in the program.

Comparison Between Program and Non-Program Participants

Comparisons were made between the 949 program participants and the 112 non-program participants for which data existed.

Demographic Differences

Participants were not randomly assigned to attend the program or be in the control group. Thus, it was expected that there would be some differences in the demographic compositions of these self-selected groups. We found the following differences: parents in the control group were more

likely to reside in a large city, more likely to have higher levels of education, and were more likely to have sent their children to a child care center and to preschool. However, there were no differences between the groups in indicators of socioeconomic status (use of TANF, WIC, Medicaid, SNAP, or free and reduced-price school lunch). In the analysis of outcomes, differences between the groups in preschool attendance and in parent education were controlled, meaning that these demographic differences could not account for the final results.

Differences in Program Outcomes

In nearly all school readiness outcomes measured, there is natural improvement over time as young children mature, even over a time frame of 10 or 16 weeks. Early childhood is a period of growth and learning for pre-kindergarten children.

The participants in *Gearing Up for Kindergarten* (program group) were assessed before beginning the program (“pre”) and at the completion of the program (“post”); the control group was assessed twice using a similar time interval. Results showed that the control group scored at a more advanced level at pretest on school readiness indicators than did the program group and generally stayed more advanced at post-test. Given the self-selected nature of the groups, this pattern may not be surprising, particularly since the control group parents had higher education levels and showed interest in a child’s school readiness by choosing to participate in the study.

To measure the impact of the program, however, we compared the improvement shown in the program group from pre to post with the improvement shown in the control group. Statistical tests showed there were three measures on which the program group improved to a greater degree than the control group. Those measures were **child academic skills**, **parent time spent reading to their child**, and the **child’s familiarity with school**. The graphs below illustrate the improvement shown by each group.

On one measure, parent knowledge of school, the control group actually improved to a greater degree than the program group, but the control group actually had a lower score than the program group at pretest, so by post-test, the two groups were equivalent in parent knowledge of school. On all of the other 11 measures, there were no differences in improvement between the program and control groups, though on most of them both groups significantly improved over time.

What is the significance of these findings? While there is much more research to be done regarding the program, these findings do indicate that there are greater improvements in some areas important to school readiness for program participants than there are for those who do not participate. Also, the findings show that while children in the program tend to score lower than this particular comparison group on school readiness indicators prior to participation, they tend to improve and “close the gap” that seems to exist as they move toward entry into the kindergarten year.

Figure 1. Change in Basic Academic Skills for Participants versus Non-Participants

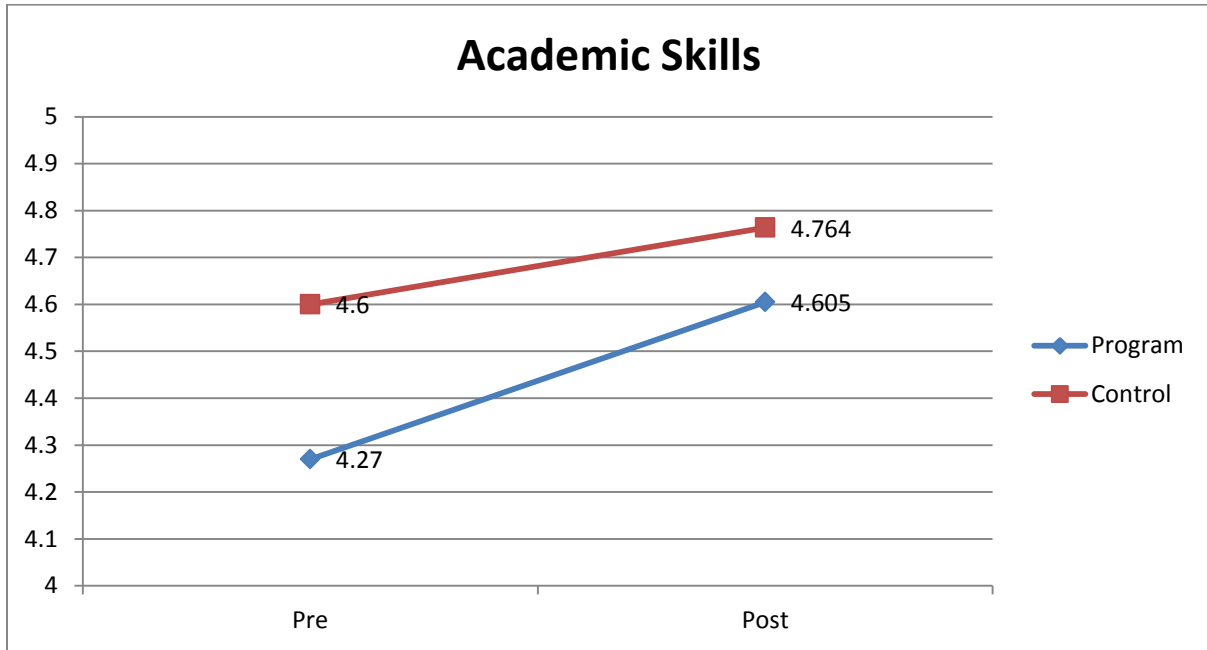


Figure 2. Change in Parent Reading Practices for Participants versus Non-Participants

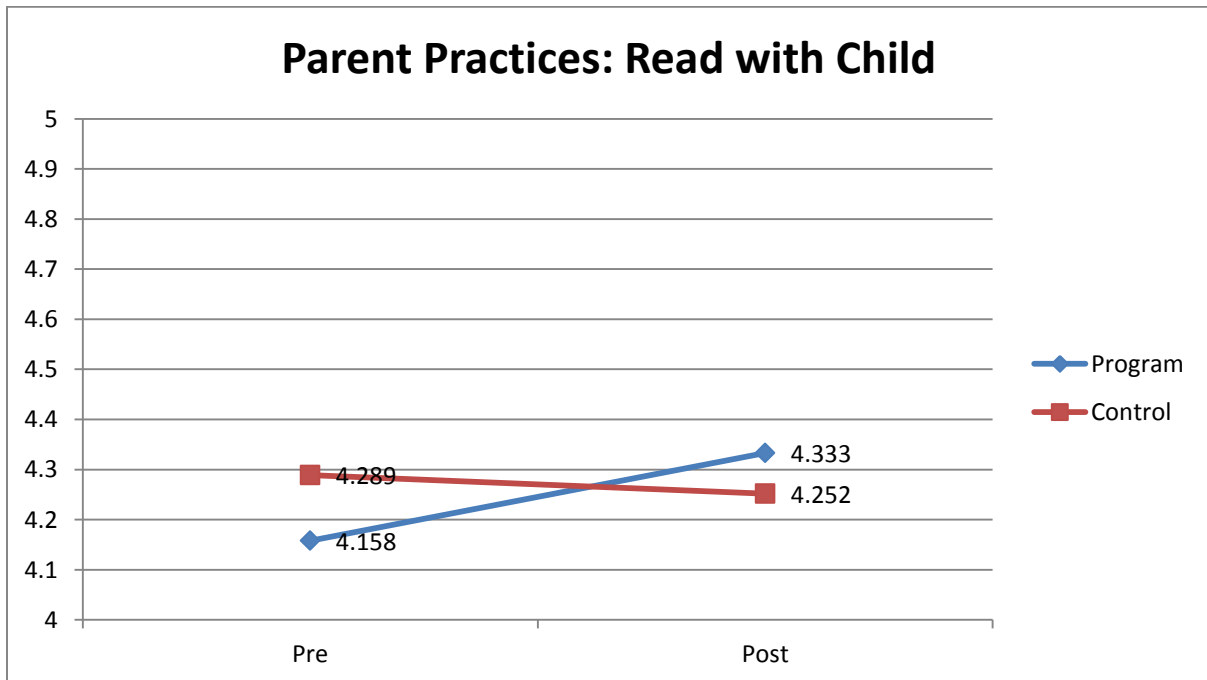
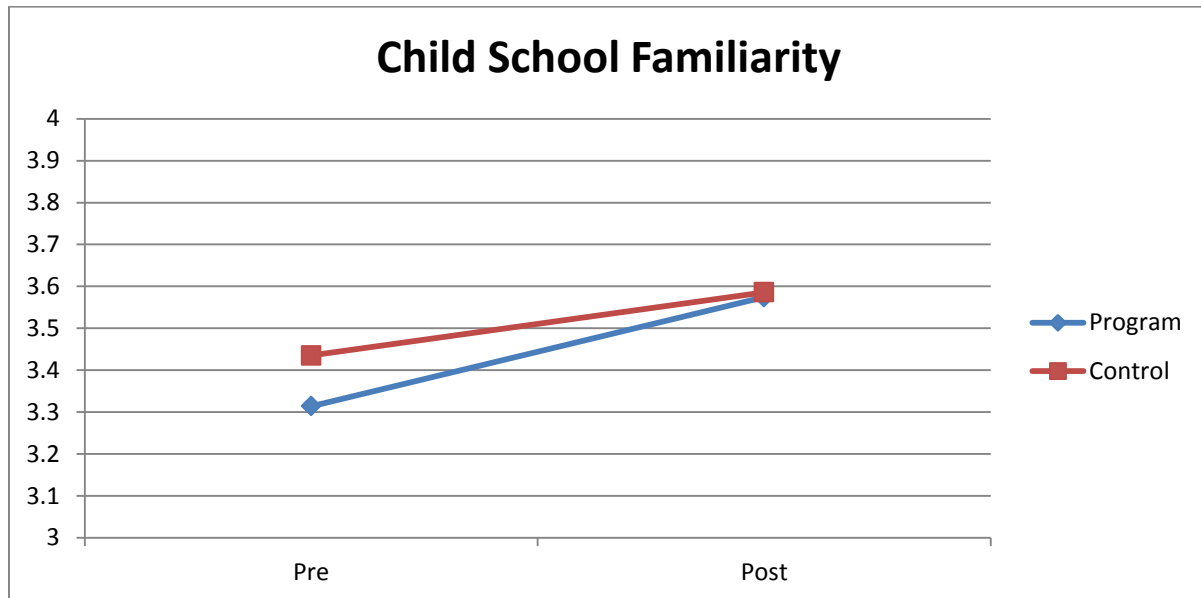


Figure 3. Change in Child’s School Familiarity for Participants versus Non-Participants



Other Factors Related to Program Outcomes

Within the group of program participants, we further examined several other factors to assess whether they were related to outcomes. Degree of program attendance (as measured by percentage of sessions attended as estimated by the parent) was not related to any of the outcomes. Two other major factors that were assessed included type of program model and socioeconomic status.

Differences by Program Type (10-week or 16-week program)

For participants in the program group, we compared post-test scores on key school readiness outcomes for those who attended a 10-week continuous session with scores for those who attended a 16-week program split into two 8-week sessions. All of these analyses controlled for parent education and for pre-test scores. On all of the following child outcomes, those who attended the split 16-week program fared better than those who attended the straight 10-week program: academic skills, emotional development, health and fitness, learning approach and effort, physical skills and abilities, and social development and peer relations. In addition, on three of the parent practices measures, the split 16-week group had higher final scores than the straight 10-week group: child development guidance, reading guidance, and social guidance. On no measure was the straight 10-week program found to have better outcomes than the split 16-week program. While gains are illustrated within both programs, in most of the areas we measured, participants in the 16-week program split into two 8-week sessions showed better outcomes than those in the 10-week program that was continuous. Thus, we would recommend implementation of the 16-week program for the best outcomes.

Differences by Indicators of Socioeconomic Status (SES)

We created a marker for low socioeconomic status (SES) that indicated if a family had reported enrollment in any one of the following programs: WIC, Medicaid, TANF, SNAP, or free or reduced-price school lunch. For participants in the program group, we compared post-test scores

of those with low SES to the scores of all the rest. On all but one measure of child outcomes, there were no differences, meaning that **the program had as strong an effect for those with low SES as it did for everyone else**. This is important because it is sometimes suggested that programs will have a different effect on those with a limited-resource status. On the health and fitness measure, children from low SES families scored slightly lower than those with higher SES. As for parent practices, there were no differences on emotional, social, and reading guidance. There were slight differences, favoring the higher SES group, on child development and practical guidance.

Conclusion

These findings regarding changes for children and parents illustrate some of the important factors influencing outcomes for those children enrolled in the *Gearing Up for Kindergarten* program. When compared to children and parents who do not participate in the program, both groups make positive gains but the program participants show higher levels of improvement on selected outcomes. These findings indicate that the program likely has a number of positive impacts on children and their families and the outcomes associated with school readiness.¹

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