This study compared the academic progress of children who had been recommended for and attended a Readiness program with those children whose parents had declined the Readiness program placement for their children. Participating were 215 students chosen over an 11 year period who had been recommended for a Readiness program and a comparison group of 39 students who had not received such a recommendation. Results indicated that 26 parents did not give a reason for refusing the Readiness placement, and 23 parents stated that their child was ready for the first grade. Boys were referred to Readiness programs twice as often as girls, with a greater proportion of parents of girls refusing placement. Students who had attended kindergarten were somewhat less likely to be recommended for Readiness programs than children who had not attended kindergarten. Children whose parents accepted the Readiness placement had a greater discrepancy between their chronological and developmental ages than did children whose parents refused the placement. A higher percentage of Readiness refusal students received special services than Readiness students; the number of special services received by the two groups did not differ. Readiness students required more special services than non-Readiness students. About three-quarters of Readiness refusal students were performing at grade level by grade 3, but 69 percent had received special services. A group of six students who did not attend kindergarten, were young developmentally, did not have Readiness education, and were not on grade level by grade 3 were identified as a risk group. (KB)
Readiness Research Project

By
Lucille M. Geddes

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Introduction

I have been teaching Readiness for thirteen years. When I was hired it was with the understanding that I would be implementing the first Readiness program in the school. After I had taught for a couple of years, I realized that it would be very beneficial for the students, parents, school district, and myself if I could somehow track the progress of the students that were recommended for Readiness, and whether or not they accepted the recommendation or not. So I decided to do this.

In the past few years many surrounding towns and school districts have eliminated their Readiness programs. Every year some parents refuse the Readiness recommendation. With others questioning the value of Readiness, I decided that it was time to use my data to evaluate my Readiness program.

I had created a form on which each child's progress would be monitored. At the completion of each school year every teacher would document on this form whether a student was "on grade level" or "below grade level" in reading and in math and whether or not a student was receiving special services: O.T., speech, remedial reading, guidance, and discipline (see Appendix for form). Also included was whether the teacher recommended that the student be retained in the same grade or advanced to the next grade level as well as the parents' decision on this issue. There was also information from the preschool screening session - his/her birth date, the date he/she entered school, the student's developmental age obtained from the Gesell School Readiness Test, whether Readiness was suggested or not, and whether the child attended Readiness or refused it.

Even though I had thirteen years of data, I decided to eliminate the first two years due in part to the newness of the Readiness program and my inexperience as a teacher. Thus, for the past eleven years my colleagues have been kind enough to spend time filling out these forms on every child who has been recommended for Readiness. The total number of students recommended for Readiness that we will be looking at is 215. However, this number will vary in the research due to the fact that some information for some students was unavailable to me. For one particular question regarding Kindergarten
I needed a control group of students who had not been recommended for Readiness. This group consisted of 39 students.

Under the direction and guidance of Nancy R. Cook, Ph.D., Associate Professor of Educational Research at Notre Dame College in Manchester, N.H., I began compiling this research data. All of my data was entered into an Excel spreadsheet. I then created a list of questions by which I would use my data to answer. The data were analyzed for validity using several statistical operations, including the t-Test, the Chi-Square Test, and the ANOVA.

As I mentioned above, every year some parents would refuse the Readiness recommendation. I was very interested to know the most influential factors in parents' decisions when they refuse Readiness. I used a random sampling in order to find out. I classified these reasons into four categories: 1) parents felt their child was ready for first grade; 2) it was a parental decision, but no specific reason was given; 3) the child was physically large in size; and 4) the Kindergarten teacher felt the student was ready. The largest category was the second. Twenty-six parents did not give a reason for their decision. The next highest category was the first. Twenty-three parents felt their child was ready for first grade. Out of the twenty-three, three stated that they would be willing to help their children if it was needed. Fourteen parents stated that their child's Kindergarten teacher felt their child was ready for first grade. One parent stated that the large physical size of their child was a determining factor in their decision for first grade over Readiness.

The remainder of this report focuses on nine questions based on the quantitative data I collected. These questions can be categorized into two groups. The first group of questions concerns Readiness students and the second group of questions focuses on the impact of the Readiness decision.
Questions Relating to the Characteristics of a Readiness Student

#1 With regards to the total number of students referred each year for Readiness, what is the ratio of males to females?

There were 107 male Readiness students and 50 female Readiness students with a total of 157 Readiness students. This ratio of approximately 2-1 surprised me. I had expected it to be 3-1. There were 24 male Readiness refusals and 34 female Readiness refusals, for a total of 58 Readiness refusals. The total males referred for Readiness was 131 and the total females referred for Readiness was 84 for a grand total of 215 students.

Figure 1
#2 Does the fact that a child has Kindergarten have any effect on whether the child is recommended for Readiness?

Out of a total of 238 students who were recommended for Readiness, 215 of them had gone to Kindergarten. Thirty-six of them, or 16.7%, went to Readiness. Twenty of them, or 9.3%, refused Readiness. One hundred and fifty-nine of them, or 74%, were not recommended for Readiness. Therefore, 26% of the students who had gone to Kindergarten had been recommended for Readiness. Out of the 238 students total, 23 of them did not have Kindergarten. Four of them, or 17.4%, went to Readiness. This same number and percentage of students refused Readiness. Fifteen of them, or 65.2%, were not recommended for Readiness. Therefore, 34.8% of the students who did not have Kindergarten had been recommended for Readiness. Comparing this percentage to the 26% who were recommended for Readiness having had Kindergarten seems to indicate that students who have Kindergarten will be less likely to be recommended for Readiness. (See Tables 1 & 2)

Table 1

<table>
<thead>
<tr>
<th></th>
<th>Readiness</th>
<th>Readiness Refusals</th>
<th>Not Recommended for Readiness</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kindergarten</td>
<td>36</td>
<td>20</td>
<td>159</td>
<td>215</td>
</tr>
<tr>
<td>No Kindergarten</td>
<td>4</td>
<td>4</td>
<td>15</td>
<td>23</td>
</tr>
<tr>
<td></td>
<td>40</td>
<td>24</td>
<td>174</td>
<td>238</td>
</tr>
</tbody>
</table>

Table 2 - Percent

<table>
<thead>
<tr>
<th></th>
<th>Readiness</th>
<th>Readiness Refusals</th>
<th>Not Recommended for Readiness</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kindergarten</td>
<td>16.7%</td>
<td>9.3%</td>
<td>74.0%</td>
<td>100%</td>
</tr>
<tr>
<td>No Kindergarten</td>
<td>17.4%</td>
<td>17.4%</td>
<td>65.2%</td>
<td>100%</td>
</tr>
</tbody>
</table>
#3 What is the relationship between the birth date of a Readiness student vs. a Readiness refusal student?

I found that the average chronological age of entry for a Readiness student is 75.5 months or 6.29 years. The average chronological age of entry for a Readiness refusal student is 74.1 months or 6.18 years. There doesn’t seem to be much of a difference between the birth date of a Readiness student vs. a Readiness refusal student. Therefore, the chronological age of a student does not seem to be a factor in whether parents accept or refuse a Readiness recommendation.

#4 Is there a relationship between males and their birth date with regards to Readiness recommendations vs. females and their birth date with regards to Readiness recommendations?

I compared four groups instead of the two mentioned: Readiness males, Readiness females, male refusals, and female refusals. I found that the average chronological age for Readiness males was 75.9 months, for Readiness females was 74.6 months, for male refusals was 74.5 months, and for female refusals was 73.9 months. In comparing these groups to each other, there were only two groups that showed any statistical significance. One of the groups was the male Readiness students and the female refusal students and the other group was the male Readiness students and the female Readiness students. Seeing as though the female refusals are the youngest group chronologically and part of the statistically significant findings, gender appears to be a factor here as to whether or not parents accept Readiness for their children.
#5 With regards to the total # of students recommended for Readiness, what is the average chronological and developmental ages?

The average chronological age for all students recommended for Readiness was 6.26 years. The average developmental age for all students recommended for Readiness was 5.35 years.

#6 What is the difference between the age of entry and the developmental age comparing Readiness and Readiness refusal students?

The average difference between the chronological age and the developmental age for the Readiness students was 14 months. The average difference between the chronological age and the developmental age for the Readiness refusal students was 11 months. Therefore, there is an average difference of 3 months. The average Readiness student has a greater discrepancy between his/her chronological and developmental ages than does a Readiness refusal student. The average Readiness student also is, on average, 14 months younger developmentally than a first grade student. A Readiness refusal student who enters first grade is, on average, 11 months younger developmentally than his peers. This gives the Readiness recommended student a clear disadvantage if the recommendation is not accepted.
The Educational Impact of a Readiness Decision

Several of my questions related to what happens to these students who were recommended for Readiness, whether or not their parents decided to give them this extra year.

#7 What is the correlation between the percent of Readiness students receiving special services vs. Readiness refusal students receiving special services?

Out of the 158 Readiness students, there were 82 students who received special services and 76 students who did not receive any special services. Out of the 58 Readiness refusal students, 40 of them received special services and 18 did not. Therefore, there is a higher percentage of Readiness refusal students receiving special services, specifically 69%, than the Readiness students, 52%. While Readiness doesn’t alleviate the need for special services, it certainly diminishes the need for it. (See Figure 2)

Figure 2

Percent of Students Receiving Special Services

<table>
<thead>
<tr>
<th></th>
<th>Readiness</th>
<th>Readiness Refusals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rec'd spec. serv.</td>
<td>52%</td>
<td>69%</td>
</tr>
<tr>
<td>Didn't rec. spec. serv.</td>
<td>48%</td>
<td>31%</td>
</tr>
<tr>
<td>n = 158</td>
<td></td>
<td>n = 58</td>
</tr>
</tbody>
</table>
#8 How many special services do Readiness students as a group require, on average, as compared to Readiness refusal students and the children who are not recommended for the Readiness program?

There were a total of 376 special services for 151 Readiness students. Therefore, on average, there were 2.5 services per Readiness student. There were a total of 133 special services for 57 students who refused Readiness. Therefore, on average, there were 2.3 services per Readiness refusal student. There were 277 special services used by 875 students who were not recommended for Readiness. Therefore, on average, there were .3 services per student in the group not recommended for Readiness. There doesn't seem to be much of a difference between the average number of special services used by Readiness students and Readiness refusal students, but there does seem to be a difference between these two groups and the students not recommended for Readiness. Therefore, this data suggests that the students recommended for Readiness will require more special services than students not recommended for Readiness.

#9 Do Readiness students “catch up” and become on grade level by third grade?

I decided to define “on grade level” by having a grade of C or above in both reading and math and receiving no special services. There were 59 Readiness students who were on grade level at third grade out of 103 Readiness students total, or 57.3%. Thus, there were 44 Readiness students, or 42.7%, who were not on grade level by third grade. I decided to check the Readiness refusal students. There were 22 Readiness refusal students who were on grade level by third grade out of 29 students total, or 75.9%. Thus, there were 7 refusal students, or 24.1%, who were not on grade level by third grade. (See Tables 3 & 4) This data suggests several things. First of all, it indicates that approximately 76% of students will be on grade level by third grade without having had Readiness. However, we do have to remember from prior data, that 69% of the Readiness refusal students received special services. So in order for them to be on grade level by third grade special services do have to be provided for them. Secondly, by
providing the Readiness students with another year, it enables most of them, 57.3%, to be on grade level by third grade. By providing them with a year of Readiness, we seem to be diminishing the need for special services later on. Thirdly, it suggests that students seem to develop at different rates and it may take some children longer than others to become on grade level by third grade. Lastly, by looking at this data collectively, we seem to have identified a very high risk group. There were six students who did not have Kindergarten, obtained a young age developmentally, became Readiness refusal students, and were not on grade level by third grade. These students were 50% male and 50% female.

Table 3

<table>
<thead>
<tr>
<th></th>
<th>Readiness</th>
<th>Readiness Refusals</th>
</tr>
</thead>
<tbody>
<tr>
<td>On Grade Level</td>
<td>59</td>
<td>22</td>
</tr>
<tr>
<td>Below Grade Level</td>
<td>44</td>
<td>7</td>
</tr>
<tr>
<td>Totals</td>
<td>103</td>
<td>29</td>
</tr>
</tbody>
</table>

Table 4

<table>
<thead>
<tr>
<th></th>
<th>Readiness</th>
<th>Readiness Refusals</th>
</tr>
</thead>
<tbody>
<tr>
<td>On Grade Level</td>
<td>57.3%</td>
<td>75.9%</td>
</tr>
<tr>
<td>Below Grade Level</td>
<td>42.7%</td>
<td>24.1%</td>
</tr>
<tr>
<td>Totals</td>
<td>100.0%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>
#10 What is the difference between the age of entry and the developmental age comparing on grade level vs. below grade level students?

For students recommended for Readiness the developmental age was less than their chronological age. The average difference between the chronological and developmental age of students who were on grade level at third grade was 13.2 months at school entry. Whereas, the average difference between the chronological and developmental age of students who were below grade level was 15.6 months. This larger difference regarding a below level student indicates the important impact that developmental younghness has on educational skills.
Conclusions and Recommendations

Based on the previous data, certain conclusions may be drawn. Students who attend Kindergarten are less likely to be recommended for Readiness. While Kindergarten does not eliminate the need for some students to have Readiness, there seems to be a positive influence on those children who do have it. Therefore, now that Governor Shaheen has provided us with state-funded Kindergarten, we should begin the planning process for public Kindergarten where there is none.

More males are recommended for Readiness than females. More males accept the recommendation for Readiness than females. I don't know why this is so. Maybe people are more accepting today of the fact that males, in general, develop at a slower rate than females. However, we need to reach the females who are young developmentally, especially those who haven't had Kindergarten. Maybe by distributing a brief flyer to parents during preschool screening with facts from this project, we could reach this section of the population. It needs to be known that some of our “at risk” girl and boy students show the following characteristics - no Kindergarten, obtain a young developmental age on the Gesell School Readiness Test, and refuse Readiness. These students seem to need special services and may not be on grade level by third grade.

A higher percentage of Readiness refusal students receive special services, 69%, than do Readiness students, 52%. While Readiness doesn't alleviate the need for special services, it certainly does seem to diminish the need for it. Along the same line, 57.3% of Readiness students are on grade level by third grade. The average difference between the chronological and developmental age of a below grade level student is 15.6 months as compared to 13.2 months for an on grade level student. These facts would attest to the importance of allowing developmentally young children more time to acquire their educational skills. Thus, supporting a definite need for Readiness, or an extra year, by some students. On the other hand, 76% of students who have refused Readiness are on grade level by third grade. However, 69% of Readiness refusals have received special services. Therefore, we have tapped into our special services in order to get them on
grade level by third grade. Knowing, as we do, that children develop at varying rates, maybe what is needed is a primary unit with some flexibility to meet the needs of students who need extra time to develop their skills. This would also provide for the student who needs an extra half or one and one half years.
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<tr>
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<td>Lucille Geddes</td>
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