



## **I. Overview of the *More at Four* Pre-Kindergarten Program**

### ***More at Four* is preparing North Carolina's at-risk four-year-olds for success in school**

*More at Four* is North Carolina's educational pre-Kindergarten program to ensure that at-risk four-year-olds start school with the necessary skills for success. The *More at Four* Pre-Kindergarten Program specifically focuses on reaching those four-year-olds who are at risk of school failure due to poverty and other risk factors and who are not served by any other early education program. *More at Four* addresses a gap in the availability of high quality pre-K for preschool children who would most benefit from an early education opportunity, but do not have access to a quality program.

### ***More at Four* is serving at-risk preschool children for its third year**

The *More at Four* Pre-Kindergarten Program began in 2001-02 with an appropriation of \$6.5 million to serve approximately 1,600 children. Funding was awarded competitively to 34 counties across the state to implement *More at Four* pre-kindergarten classrooms. However, because funding was not available until mid-year, no county was able to provide *More at Four* services for a full school year in this first year of implementation.

In 2002-03, the program expanded statewide to serve 7,600 four-year-olds in the second year, with a total appropriation of \$34.5 million. Funding to implement *More at Four* was available to every county that chose to participate and an additional 56 counties began providing *More at Four* programs, bringing total participation to 90 counties.

In 2003-04, *More at Four* was expanded to serve 10,000 at-risk four-year-olds statewide, with a total appropriation of \$43.1 million. As of December 31, 2003, 99 counties are participating in *More at Four*.

### ***More at Four* is helping close the achievement gap**

We know that children facing the disadvantages of poverty in their preschool years have less exposure to the basic language and math skills necessary for success in Kindergarten. Children who start Kindergarten behind their classmates may never catch up. Compelling research demonstrates that pre-K programs like *More at Four* are successful in preparing at-risk young children for school.

Several studies of other programs have followed children over many years, finding not only short-term academic benefits of pre-K, but also major long-term academic and social benefits, such as higher academic achievement, more years of educational attainment, lower high school drop-out rates, and lower arrest rates. A plan is in place to evaluate the current and long-term success of *More at Four*.

## ***More at Four* classrooms meet the highest quality standards**

*More at Four* classrooms meet the highest quality standards that have been proven effective in promoting school readiness. Class sizes are small – no more than 18 children per class, with a teacher and teacher assistant. Teachers must be licensed in early childhood education. Programs must use a research-based curriculum and five have been recommended by a committee of curriculum experts. Families are involved in their children's education.

The *More at Four* classroom presents academic content in a developmentally appropriate context. Students in a *More at Four* classroom learn through child-initiated and teacher-initiated activities. Through these activities, children accomplish the work of learning language, math, science, and social skills. Such skills include counting, recognizing some alphabet letters, understanding the world around them, how and why we use books, and the broad range of skills that make future learning possible. Like all high quality programs, *More at Four* classrooms are responsive to cultural diversity and the needs of individual children.

## ***More at Four* fosters coordination and collaboration within North Carolina's early care and education system**

Communities implement *More at Four* classrooms in a variety of settings, including licensed child care centers, public schools, and Head Start programs, according to locally determined needs and resources. At the state and local levels, *More at Four* works closely with Smart Start, the public schools, Head Start, licensed child care providers, the Division of Child Development, the early intervention system and other relevant programs to create a coordinated system of early care and education services for North Carolina's young children.

Building on each community's existing early care and education delivery system, *More at Four* programs are implemented by coordinating with local programs. Local communities develop collaborative plans for implementing *More at Four* classrooms, with shared leadership from Smart Start and the public schools and broad representation from early childhood service providers.

## II. *More at Four* Program Implementation, SFY 2002-03

### A. Children Served

During the SFY 2002-03, *More at Four* served 6,271 children. A total of 6,865 slots were contracted in 90 counties to provide *More at Four* educational services. Therefore, the vast majority (91%) of high quality pre-K slots funded this year were filled.

#### ***More at Four* Serves Children with Risk Factors for School Failure<sup>1</sup>**

Children served by *More at Four* must have risk factors that place them in jeopardy of school failure, and program data confirm that this service priority is being met.

Family income is the leading risk factor. Data show that substantial proportions of children served by *More at Four* during SFY 2002-03 typically had more than one risk factor. For example:

- eligibility for free or reduced lunch (84.1% of children served);
- living in multiple places during the previous year or had no stable place to live (31.9%);
- having a mother with a GED or no high school diploma (37.6%); and
- having been identified with a disability (11%).

Of particular note, data show that *More at Four* classrooms are striving to be inclusive of children with disabilities. Eleven percent of children in *More at Four* classrooms had identified disabilities in SFY 2002-03. This exceeds the *More at Four* program goal of serving a minimum of ten percent of children with disabilities.

Among those four-year-olds identified with risk factors, those who have never been served in any preschool or child care setting have first priority for *More at Four* participation followed by those currently underserved. During the SFY 2002-03, the majority of children who received services:

- were currently unserved in or never received child care (88.5%);
- had never received child care in a licensed or regulated facility (75.3%); and
- had never been served in any child care setting prior to their participation (70.2%).

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<sup>1</sup> Risk factor data included in this section of the report were not available for children and families served within Allegheny or Martin counties because counties were not required to submit their data online using the *More at Four* Reporting System (MAFREPS) during the 2002-03 SFY.

## B. Preliminary Child Outcomes, SFY 2002-03

In the 2002-03, the first year for any classes to operate for a full school year, 271 *More at Four* children in 40 randomly sampled classrooms were selected for pre- and post assessments. The average child age at the fall 2002 assessments was 4 years, 6 months and 5 years, 1 month at the spring 2003 assessments. It was impossible to construct a control or comparison group, but growth was assessed in terms of gains relative to national norms.

The assessment battery consisted of eight measures focusing on language and literacy skills, pre-math skills, and general knowledge. In addition, lead teachers rated each child's social skills and problem behaviors in the classroom. While additional analyses are still to be conducted by the external evaluators, with a final 2002-03 evaluation report due early in 2004, initial child gain scores on measures can be reported.

Children showed significant gain scores on all outcome measures over the program year, except for one. The amount of change was substantial for most measures, on the order of one-half standard deviation or more. Specifically, children:

- increased language and literacy skills, including receptive language ability, phonological awareness, alphabet knowledge, and early literacy skills.
- increased their cognitive skills over the *More at Four* year, including pre-math skills and general knowledge.
- improved in social skills over the course of the year, based on teacher ratings. The one exception was teacher ratings of problem behaviors. That is, positive social skills increased, but problem behaviors did not decrease substantially.

In other preliminary analyses, evaluators found that *More at Four* children:

- at greater risk (based on risk factors in the program guidelines) tended to show even greater gains in language/literacy and cognitive skills than those at lower risk;
- at a higher level of service priority status tended to make greater gains in math skills than children at lower service priority levels; and
- instructed by teachers who held Birth-Kindergarten licensure (or the equivalent) and directors/principals with higher levels of administrative credentials had some greater developmental gains.

In addition, children served in *More at Four* classrooms with higher levels of implementation of the specific curriculum showed greater growth in social skills development, both in terms of increased positive behaviors and decreased negative behaviors. However, higher implementation was also associated with lower growth in language/literacy skills. Further exploration is needed to determine if this is related to actual effects of curriculum practices which may limit activities related to language or to other difference in characteristics of these classrooms or children served.

## C. County and Site Participation

### ***More at Four* serves children in nearly all North Carolina counties**

In 2002-03, 90 counties participated in *More at Four*. See Appendix A for county data on participation and children served. When reviewing these data, note that the total number of children served may be greater than the number under contract due to child turnover.

### ***More at Four* providers served children within a variety of educational settings**

Table I displays the distribution of types of educational settings (i.e. sites) and shows that:

- half of *More at Four* sites (49.0%) are located in public schools, and they served approximately half (45.9%) of all *More at Four* children;
- approximately 40 percent of sites are private child care settings. Most of these are for-profit centers (serving approximately 31 percent of the children); and
- another one tenth of sites (10.5%) are located in Head Start programs.

**Table I. Types of *More at Four* Sites and Number of Children Served, SFY 2002-03**

| Site Type                            | Number of Sites | % of Sites    | Number of Children Served | % of Children Served |
|--------------------------------------|-----------------|---------------|---------------------------|----------------------|
| Public School District <sup>1</sup>  | 210             | 49.0%         | 2,880                     | 45.9%                |
| Private For-profit Child Care Center | 117             | 27.3%         | 1,967                     | 31.4%                |
| Private Nonprofit Child Care Center  | 49              | 11.4%         | 698                       | 11.1%                |
| Head Start <sup>2</sup>              | 45              | 10.5%         | 555                       | 8.9%                 |
| Other or Not Reported                | 8               | 1.9%          | 171                       | 2.7%                 |
| <b>Total</b>                         | <b>429</b>      | <b>100.0%</b> | <b>6,271</b>              | <b>100.0%</b>        |

<sup>1</sup> Sites in public school settings include charter schools, those partnering with private centers or other type of providers to serve children within public school facilities.

<sup>2</sup> Head Start includes Head Start sites located within public schools.

## **D. Teacher Credentials**

### **Many *More at Four* teachers meet program standards for teacher licensure and educational training guidelines**

It is the goal that *More at Four* classrooms will be staffed by a lead teacher with NC Birth-Kindergarten or Pre-school Add-on licensure within four years of the establishment of the classroom. A growing body of research links teachers with four-year degrees and specialized knowledge in early childhood education with better child outcomes. The majority of *More at Four* teachers currently are under provisional approval as teachers work toward meeting the goal specified in the *More at Four* Guidelines.

During the SFY 2002-03, there were 140 teachers. Many of these teachers:

- held Birth-Kindergarten or Pre-school Add-on licenses (31.9%); or
- held another type of North Carolina teaching license (24.9%); and
- had earned bachelor degrees or higher (85.5%).

In the SFY 2002-03, 21.2% of lead teachers were working toward their B-K or Preschool Add-on license. There were 166 *More at Four* teachers participating in the T.E.A.C.H. scholarship programs with funds provided by *More at Four* to further their education. These teachers completed 2,241 credit hours of course work at North Carolina colleges and universities.<sup>2</sup>

Some barriers inhibited *More at Four* teachers from achieving the required credentials. Barriers included the lack of effective articulation agreements between some community colleges and universities as well as the lack of course offerings to complete requirements. There is currently no process or structure in place for teachers in private centers to obtain provisional or lateral entry licensure. In order to reduce these and other barriers, the *More at Four* State Office is working with the North Carolina BK Consortium (members include university and community college early childhood faculty) and the Department of Public Instruction.

## **E. SFY 2002-03 Expenditure Data**

### ***More at Four* providers almost completely filled contracted slots**

During SFY 2002-03, the program was offered statewide and 90 counties participated in the program. Funding was authorized for 7,623 child slots based on allocation of slots among counties by free and reduced lunch data. A total of 6,865 child slots were under contract during the year for 83 contractors. Of the 6,865 slots under

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<sup>2</sup> T.E.A.C.H. Early Childhood® Project gives scholarships to child care staff to complete course work in early childhood education.

contract, a total of 6,271 children were served between July 2002 and June 2003. Thus, 91.3 percent of approved operational slots were filled.

*More at Four's* contribution to the overall cost per child for high quality pre-K was \$2,872. This figure does not represent a full year of service, estimated at a *More at Four* rate of \$3, 710 per child.

The 737 slots not under contract largely resulted from the late state budget approval and inability of a few counties to find space, providers, qualified teachers, and/or children mid-year. In spite of budget barriers, the majority of slots were filled. Categories of actual expenditures are shown for SFY 2002-03 in Table II. Again, the actual expenditures reported do not reflect a full ten months of operation.

**Table II: *More at Four* Program Expenditures, SFY 2002-03<sup>3</sup>**

| Expenditure Category<br>State <i>More at Four</i> Funds | Total<br>Expenditures | % of<br>Total<br>Expenditures |
|---------------------------------------------------------|-----------------------|-------------------------------|
| Classroom Start-up Funds (one-time allocation)          | \$1,966,263           | 10.9%                         |
| Classroom Operational Funding                           | \$14,485,165          | 80.4%                         |
| <b>Subtotal-Expenditures for classroom operations</b>   | <b>\$16,451,429</b>   | <b>91.3%</b>                  |
| Professional Development                                | \$243,179             | 1.4%                          |
| T.E.A.C.H.® Scholarships                                | \$443,739             | 2.5%                          |
| External Evaluation and Database Development            | \$406,177             | 2.3%                          |
| Administrative Costs                                    | \$465,515             | 2.6%                          |
| <b>Total Expenditures</b>                               | <b>\$18,010,039</b>   | <b>100.0%</b>                 |

The Legislation requires that other sources of funds, such as Title I, Smart Start, Head Start, or county allocations be used to fully fund the *More at Four* Program. In fact, *More at Four* funds only approximately half the cost of high quality pre-K, requiring other funding sources be used. The local contractors reported \$13,766,295 in other sources, equaling 48.7 percent of operational (recurring) funding and 45.6 percent of total expenditures. (See Table III). Thus, as intended by the legislation, other sources of funds provided a substantial portion of the costs for the *More at Four* Pre-Kindergarten Program.

<sup>3</sup> Note that the SFY 2002-03 is not a typical funding year because it is the first year the *More at Four* Program was offered statewide and many counties were not able to serve children.

<sup>4</sup> Note that the SFY 2002-03 expenditure data does not represent a full year of program operation.



**Table III. *More at Four* and Local Expenditures, SFY 2002-03**

| <b>Expenditure Category<br/>for Classroom Operation</b>               | <b>Total<br/>Expenditures<sup>4</sup></b> | <b>% of<br/>Total<br/>Operations</b> | <b>% of<br/>Total<br/>Expenditures</b> |
|-----------------------------------------------------------------------|-------------------------------------------|--------------------------------------|----------------------------------------|
| 1. <i>More at Four</i> Start-Up Funding                               | \$1,966,263                               | N/A                                  | 6.5%                                   |
| 2. <i>More at Four</i> Operational Funding                            | \$14,485,165                              | 51.3%                                | 47.9%                                  |
| 3. Local Contributions Reported                                       | \$13,766,295                              | 48.7%                                | 45.6%                                  |
| 4. Total Operational Funding<br>(#2- <i>More at Four</i> + #3- Local) | \$28,251,460                              | 100.0%                               | 93.5%                                  |
| <b>Total Classroom Expenditures<br/>(#1+#2+#3)</b>                    | <b>\$30,217,723</b>                       | <b>N/A</b>                           | <b>100.0%</b>                          |

### **III. *More at Four* Program Implementation, SFY 2003-04 as of December 31, 2003**

#### **A. Children Served**

**As of December 31, 2003, *More at Four* has served 2,961 more children than last year**

In SFY 2003-04, the original 7,623 slots were available through the continuation budget and an additional 2,400 slots were approved for expansion of the program, making a total of 10,023 slots authorized for allocation statewide for SFY 2003-04. As of December 31, 2003, at least 9,232 children were served in 99 counties by *More at Four* providers; an increase of 2,961 children from the total served last year. This figure is low since all of the children served in December have not been reported. December 2003 child enrollment data is due January 15, 2004.

#### **B. County Participation**

**As of December 31, 2003, *More at Four* is implemented in 99 counties within the State**

Since the SFY 2002-03, 9 additional counties have contracted to provide *More at Four* services for children. See Appendix A for county data on participation and children served. When reviewing these data, note that the total number of children served may be greater than the number under contract due to child turnover.

#### **C. SFY 2003-04 Budget Data**

The budgeted amounts and anticipated expenditures by category are provided for SFY 2003-04 in Table IV.

**Table IV: *More at Four* Budgeted Amounts for SFY 2003-04 as of December 31, 2003**

| <b>Budget Category</b>                                | <b>Budgeted Amount</b> | <b>% of Total Budget</b> |
|-------------------------------------------------------|------------------------|--------------------------|
| Classroom Start-up Funds (one-time allocation)        | \$2,200,000            | 5.1%                     |
| Classroom Operational Funding                         | \$37,162,685           | 86.2%                    |
| <b>Subtotal-Expenditures for classroom operations</b> | <b>\$39,362,685</b>    | <b>91.3%</b>             |
| T.E.A.C.H.® Scholarships                              | \$740,000              | 1.7%                     |
| Professional Development                              | \$768,399              | 1.8%                     |
| External Evaluation and Database Development          | \$988,931              | 2.3%                     |
| Administrative Costs                                  | \$1,263,427            | 2.9%                     |
| <b>Total Budget</b>                                   | <b>\$43,123,442</b>    | <b>100.0%</b>            |

The amount of local contributions anticipated to date is \$28,879,718. Combined with the *More at Four* funding, the total budget supporting the *More at Four* Programs is \$72,003,160. The local contribution represents 44 percent of the classroom operating funding (not including one-time start-up funds).

As of December 31, 2003, all but \$1,732,137 of the \$37,162,685 operational budget has been obligated/or under contract. Additionally, all but \$167,000 of the \$2,200,000 of the Start-up budget have been obligated/or under contract. Projected expenditures for the remaining fiscal year are tentative as of this report, as the predominant percentage of funding expended will be determined by local contract expenditures. A few counties are still not under contract for their expansion slots.

The State *More at Four* Pre-Kindergarten Program Office is entering into and revising contracts with counties as they establish classroom locations and number of slots. Therefore, the numbers under contract will change as contractors are able to establish additional classrooms. A total of 10,023 slots are authorized for allocation during the SFY 2003-04. Table V shows the number of slots under contract and the statewide average per slot for the SFY 2003-04, as of December 31, 2003.

**Table V: Funds and Slots under Contract,  
SFY 2003-04 as of December 31, 2003**

| Contracted Category                           | Contracted Amount   | Number of Slots | Statewide Average per Slot |
|-----------------------------------------------|---------------------|-----------------|----------------------------|
| <i>More at Four</i> Start-up Funds            | \$2,026,000         | 4,052           | \$500                      |
| <i>More at Four</i> Operating Classroom Funds | \$35,377,129        | 9,691           | \$3,651                    |
| Total <i>More at Four</i> Funding             | <b>\$37,403,129</b> | <b>9,691</b>    | N/A                        |

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## IV. Summary

The *More at Four* Pre-Kindergarten Program has met the following legislative mandates and program goals. The Program:

- expanded to 99 North Carolina counties;
- served 2,961 more children at the time of this report than the total served during the SFY 2002-03;
- served children with risk factors who were previously unserved;
- prepared more four-year-olds with risk factors for school success;
- improved children's skills;
- served 4-year-olds in high quality settings within a diverse system of providers;
- maximized and leveraged resources; and
- by its expansion, has increased opportunities for families to enroll their children in high quality pre-K settings



## Appendix A.

### Children Served by *More at Four* by County in SFY 2002-03 and SFY 2003-04

| SFY 2002-03        |                                                                       |                                              |                                      | SFY 2003-04<br>as of December 31, 2003              |                                              |                                      |
|--------------------|-----------------------------------------------------------------------|----------------------------------------------|--------------------------------------|-----------------------------------------------------|----------------------------------------------|--------------------------------------|
| County /<br>Region | Contractor                                                            | Number of<br>Children<br>Served <sup>3</sup> | Number of<br>Slots Under<br>Contract | New<br>Contractor (or<br>contractor has<br>changed) | Number of<br>Children<br>Served <sup>4</sup> | Number of<br>Slots Under<br>Contract |
| <b>Alamance</b>    | Alamance-Burlington School System                                     | 34                                           | 102                                  |                                                     | 106                                          | 102                                  |
| <b>Alexander</b>   | Alexander County Partnership for Children                             | 32                                           | 33                                   |                                                     | 35                                           | 40                                   |
| <b>Alleghany</b>   | Alleghany County Schools                                              | 18                                           | 18                                   |                                                     | 21                                           | 21                                   |
| <b>Anson</b>       | Union County Community Action & Anson County Partnership for Children | 40                                           | 83                                   | (Anson County Partnership for Children)             | 69                                           | 94                                   |
| <b>Ashe</b>        | Ashe County School System                                             | 21                                           | 19                                   |                                                     | 32                                           | 36                                   |
| <b>Avery</b>       | Avery County Partnership for Children                                 | 38                                           | 39                                   | (Avery County Public Schools)                       | 38                                           | 44                                   |
| <b>Beaufort</b>    | Beaufort County Partnership for Children                              | 90                                           | 88                                   |                                                     | 92                                           | 106                                  |
| <b>Bertie</b>      | Bertie County Schools                                                 | 0                                            | 40                                   |                                                     | 0                                            | 40                                   |
| <b>Bladen</b>      | N/A <sup>1</sup>                                                      | N/A                                          | N/A                                  | Bladen School System                                | 64                                           | 62                                   |
| <b>Brunswick</b>   | Brunswick County Partnership for Children                             | 57                                           | 62                                   |                                                     | 61                                           | 80                                   |
| <b>Buncombe</b>    | Buncombe County Smart Start                                           | 59                                           | 63                                   |                                                     | 76                                           | 75                                   |
| <b>Burke</b>       | Burke County Partnership for Children                                 | 113                                          | 102                                  |                                                     | 143                                          | 130                                  |
| <b>Cabarrus</b>    | Cabarrus County Partnership for Children                              | 109                                          | 123                                  |                                                     | 176                                          | 168                                  |
| <b>Caldwell</b>    | Communities in Schools of Caldwell County, Inc.                       | 49                                           | 58                                   |                                                     | 52                                           | 49                                   |

| SFY 2002-03     |                                            |                                        |                                | SFY 2003-04<br>as of December 31, 2003     |                                        |                                |
|-----------------|--------------------------------------------|----------------------------------------|--------------------------------|--------------------------------------------|----------------------------------------|--------------------------------|
| County / Region | Contractor                                 | Number of Children Served <sup>3</sup> | Number of Slots Under Contract | New Contractor (or contractor has changed) | Number of Children Served <sup>4</sup> | Number of Slots Under Contract |
| Camden          | Camden County Board of Education           | 16                                     | 18                             |                                            | 18                                     | 18                             |
| Carteret        | Carteret County Schools                    | 65                                     | 61                             |                                            | 76                                     | 72                             |
| Caswell         | Caswell County Schools                     | 21                                     | 20                             |                                            | 20                                     | 26                             |
| Catawba         | Catawba County Partnership for Children    | 114                                    | 95                             |                                            | 141                                    | 135                            |
| Chatham         | Chatham County Partnership for Children    | 29                                     | 34                             |                                            | 41                                     | 45                             |
| Chowan          | Edenton-Chowan Board of Education          | 19                                     | 18                             |                                            | 24                                     | 24                             |
| Cleveland       | Cleveland County Partnership for Children  | 51                                     | 84                             |                                            | 111                                    | 111                            |
| Columbus        | Columbus County Schools                    | 63                                     | 67                             |                                            | 94                                     | 90                             |
| Craven          | Craven County Board of Education           | 45                                     | 58                             |                                            | 71                                     | 88                             |
| Cumberland      | Cumberland County Partnership for Children | 144                                    | 264                            |                                            | 477                                    | 404                            |
| Currituck       | Currituck County Schools                   | 19                                     | 18                             |                                            | 20                                     | 18                             |
| Dare            | N/A                                        | N/A                                    | N/A                            | Dare County Schools                        | 18                                     | 18                             |
| Davidson        | Davidson County Partnership for Children   | 152                                    | 132                            |                                            | 177                                    | 162                            |
| Davie           | Davie County Schools                       | 34                                     | 44                             |                                            | 47                                     | 44                             |
| Duplin          | Duplin County Schools                      | 25                                     | 65                             |                                            | 50                                     | 86                             |
| Durham          | Durham's Partnership for Children          | 103                                    | 229                            |                                            | 206                                    | 299                            |
| Edgecombe/Nash  | N/A                                        | N/A                                    | N/A                            | Down East Partnership for Children         | 90                                     | 190                            |



| SFY 2002-03        |                                                              |                                              |                                      | SFY 2003-04<br>as of December 31, 2003                          |                                              |                                      |
|--------------------|--------------------------------------------------------------|----------------------------------------------|--------------------------------------|-----------------------------------------------------------------|----------------------------------------------|--------------------------------------|
| County /<br>Region | Contractor                                                   | Number of<br>Children<br>Served <sup>3</sup> | Number of<br>Slots Under<br>Contract | New<br>Contractor (or<br>contractor has<br>changed)             | Number of<br>Children<br>Served <sup>4</sup> | Number of<br>Slots Under<br>Contract |
| Forsyth            | Forsyth Early<br>Childhood<br>Partnership, Inc.              | 186                                          | 188                                  |                                                                 | 228                                          | 305                                  |
| Franklin           | N/A                                                          | N/A                                          | N/A                                  | Franklin-<br>Granville-<br>Vance<br>Partnership for<br>Children | 6                                            | 18                                   |
| Gaston             | Gaston County<br>Schools                                     | 212                                          | 186                                  |                                                                 | 258                                          | 238                                  |
| Gates              | Gates County<br>Board of Education                           | 7                                            | 10                                   |                                                                 | 11                                           | 14                                   |
| Granville          | Granville County<br>Schools                                  | 33                                           | 32                                   | Franklin-<br>Granville-<br>Vance<br>Partnership for<br>Children | 32                                           | 32                                   |
| Guilford           | Guilford County<br>Partnership for<br>Children               | 425                                          | 402                                  |                                                                 | 545                                          | 507                                  |
| Halifax-Warren     | Halifax-Warren<br>Smart Start<br>Partnership for<br>Children | 29                                           | 115                                  |                                                                 | 132                                          | 151                                  |
| Harnett            | N/A                                                          | N/A                                          | N/A                                  | Harnett County<br>Partnership for<br>Children                   | 100                                          | 129                                  |
| Henderson          | Henderson County<br>Partnership for<br>Children              | 45                                           | 48                                   |                                                                 | 72                                           | 70                                   |
| Hertford           | Hertford County<br>Schools                                   | 37                                           | 36                                   |                                                                 | 47                                           | 46                                   |
| Hoke               | Hoke County<br>Schools                                       | 99                                           | 90                                   |                                                                 | 97                                           | 111                                  |
| Hyde               | Hyde County<br>Schools                                       | 12                                           | 18                                   |                                                                 | 14                                           | 15                                   |
| Iredell            | Mooreville Graded<br>School District                         | 125                                          | 118                                  | Iredell Co<br>Partnership for<br>Children                       | 138                                          | 160                                  |
| Johnston           | Partnership for<br>Children of<br>Johnston County            | 140                                          | 132                                  |                                                                 | 157                                          | 168                                  |
| Jones              | N/A                                                          | N/A                                          | N/A                                  | Jones County<br>Partnership for<br>Children                     | 23                                           | 28                                   |



| SFY 2002-03     |                                                          |                                        |                                | SFY 2003-04<br>as of December 31, 2003     |                                        |                                |
|-----------------|----------------------------------------------------------|----------------------------------------|--------------------------------|--------------------------------------------|----------------------------------------|--------------------------------|
| County / Region | Contractor                                               | Number of Children Served <sup>3</sup> | Number of Slots Under Contract | New Contractor (or contractor has changed) | Number of Children Served <sup>4</sup> | Number of Slots Under Contract |
| Lee             | Lee County Partnership for Children                      | 19                                     | 50                             |                                            | 68                                     | 66                             |
| Lenoir/Greene   | Lenoir/Greene Partnership for Children                   | 137                                    | 144                            |                                            | 183                                    | 175                            |
| Lincoln         | Partnership for Children of Lincoln & Gaston Counties    | 46                                     | 54                             |                                            | 56                                     | 68                             |
| Madison         | The Opportunity Corporation of Madison-Buncombe Counties | 5                                      | 18                             |                                            | 18                                     | 18                             |
| Martin          | Martin County Schools                                    | 4                                      | 21                             |                                            | 33                                     | 31                             |
| McDowell        | McDowell County Schools                                  | 31                                     | 33                             |                                            | 45                                     | 44                             |
| Mecklenburg     | Mecklenburg Partnership for Children                     | 645                                    | 648                            |                                            | 938                                    | 858                            |
| Mitchell        | Intermountain Children's Services, Inc.                  | 22                                     | 18                             |                                            | 25                                     | 23                             |
| Montgomery      | Montgomery County Partnership for Children               | 34                                     | 35                             |                                            | 62                                     | 98                             |
| Moore           | Moore County Schools                                     | 31                                     | 45                             |                                            | 31                                     | 30                             |
| New Hanover     | New Hanover County Schools                               | 127                                    | 108                            |                                            | 151                                    | 143                            |
| Northampton     | Northampton County Schools                               | 31                                     | 54                             |                                            | 29                                     | 54                             |
| Onslow          | N/A                                                      | N/A                                    | N/A                            | Onslow County Schools                      | 0                                      | 52                             |
| Orange          | Orange County Partnership for Young Children             | 122                                    | 110                            |                                            | 126                                    | 124                            |
| Pamlico         | Pamlico County Schools                                   | 19                                     | 18                             |                                            | 18                                     | 17                             |
| Pasquotank      | N/A                                                      | N/A                                    | N/A                            | County Task Force TBD                      | 0                                      | ***                            |

| SFY 2002-03           |                                                        |                                              |                                      | SFY 2003-04<br>as of December 31, 2003              |                                              |                                      |
|-----------------------|--------------------------------------------------------|----------------------------------------------|--------------------------------------|-----------------------------------------------------|----------------------------------------------|--------------------------------------|
| County /<br>Region    | Contractor                                             | Number of<br>Children<br>Served <sup>3</sup> | Number of<br>Slots Under<br>Contract | New<br>Contractor (or<br>contractor has<br>changed) | Number of<br>Children<br>Served <sup>4</sup> | Number of<br>Slots Under<br>Contract |
| Pender                | Pender County<br>Partnership for<br>Children           | 18                                           | 18                                   |                                                     | 65                                           | 64                                   |
| Perquimans            | Perquimans County<br>Schools                           | 19                                           | 18                                   |                                                     | 23                                           | 22                                   |
| Person                | Person County<br>Partnership for<br>Children           | 26                                           | 26                                   |                                                     | 37                                           | 37                                   |
| Pitt                  | Pitt County Public<br>Schools                          | 142                                          | 143                                  |                                                     | 173                                          | 190                                  |
| Polk                  | Polk County<br>Schools                                 | 18                                           | 18                                   |                                                     | 59                                           | 58                                   |
| Randolph              | Randolph County<br>Partnership for<br>Children         | 36                                           | 71                                   |                                                     | 94                                           | 102                                  |
| Region A <sup>2</sup> | Region A<br>Partnership for<br>Children                | 173                                          | 163                                  |                                                     | 220                                          | 208                                  |
| Richmond              | Richmond County<br>Schools                             | 65                                           | 64                                   |                                                     | 88                                           | 85                                   |
| Robeson               | Public Schools of<br>Robeson County                    | 317                                          | 278                                  |                                                     | 359                                          | 377                                  |
| Rockingham            | Rockingham<br>County Partnership<br>for Children, Inc. | 66                                           | 76                                   |                                                     | 111                                          | 119                                  |
| Rowan                 | Rowan Partnership<br>for Children                      | 22                                           | 58                                   |                                                     | 118                                          | 108                                  |
| Rutherford            | Rutherford County<br>Schools                           | 48                                           | 64                                   |                                                     | 90                                           | 85                                   |
| Sampson               | Sampson County<br>Partnership for<br>Children          | 95                                           | 90                                   |                                                     | 115                                          | 125                                  |
| Scotland              | Scotland County<br>Schools                             | 81                                           | 72                                   |                                                     | 81                                           | 72                                   |
| Stanly                | Stanly County<br>School System                         | 38                                           | 34                                   |                                                     | 38                                           | 34                                   |
| Stokes                | Stokes Partnership<br>for Children, Inc.               | 9                                            | 28                                   |                                                     | 44                                           | 42                                   |
| Surry                 | Surry County<br>School                                 | 100                                          | 81                                   |                                                     | 108                                          | 99                                   |

| SFY 2002-03     |                                        |                                        |                                | SFY 2003-04<br>as of December 31, 2003     |                                        |                                |
|-----------------|----------------------------------------|----------------------------------------|--------------------------------|--------------------------------------------|----------------------------------------|--------------------------------|
| County / Region | Contractor                             | Number of Children Served <sup>3</sup> | Number of Slots Under Contract | New Contractor (or contractor has changed) | Number of Children Served <sup>4</sup> | Number of Slots Under Contract |
| Transylvania    | Smart Start of Transylvania County     | 13                                     | 9                              |                                            | 30                                     | 30                             |
| Tyrrell         | N/A                                    | N/A                                    | N/A                            | Tyrell County Schools                      | 13                                     | 13                             |
| Union           | Union County Partnership for Children  | 84                                     | 98                             |                                            | 140                                    | 134                            |
| Vance           | Vance County Schools                   | 20                                     | 18                             |                                            | 37                                     | 36                             |
| Wake            | Wake County Smart Start, Inc.          | 256                                    | 259                            |                                            | 353                                    | 396                            |
| Washington      | Washington County Schools              | 26                                     | 25                             |                                            | 33                                     | 33                             |
| Watauga         | Watauga County Schools                 | 32                                     | 24                             |                                            | 39                                     | 34                             |
| Wayne           | Wayne County Partnership for Children  | 180                                    | 179                            |                                            | 263                                    | 286                            |
| Wilkes          | Wilkes County Schools                  | 57                                     | 57                             |                                            | 79                                     | 76                             |
| Wilson          | Wilson County Partnership for Children | 111                                    | 90                             |                                            | 94                                     | 108                            |
| Yadkin          | Yadkin County Partnership for Children | 25                                     | 25                             |                                            | 29                                     | 33                             |
| Yancey          | Region D Child Care, Inc.              | 11                                     | 11                             |                                            | 10                                     | 15                             |
| <b>Total</b>    | <b>90 Counties</b>                     | <b>6,271</b>                           | <b>6,865</b>                   | <b>99 Counties</b>                         | <b>9,232</b>                           | <b>9,691</b>                   |

<sup>1</sup> N/A indicates county was not participating in the program during that year.

<sup>2</sup> Region A includes Clay, Cherokee, Graham, Haywood, Jackson, Macon, and Swain counties.

<sup>3</sup> Number of children served during the SFY 2002-03 FY was submitted by the More at Four evaluator, Frank Porter Graham, on November 26, 2003. This figure may exceed the total slots allocated by the contract due to child turnover.

<sup>4</sup> Number of children served was obtained using data submitted by contractors using the live More at Four Reporting System (MAFREPS) as of December 31, 2003.

**Appendix B**  
**Fall and Spring Child Outcome Scores for 2002-2003.**

| Child Outcome Measure <sup>1</sup>           | Fall 2002      |        |                 |        | Spring 2003 |        |       |        | t-test <sup>4</sup> |
|----------------------------------------------|----------------|--------|-----------------|--------|-------------|--------|-------|--------|---------------------|
|                                              | N <sup>2</sup> | Mean   | SD <sup>3</sup> | Range  | N           | Mean   | SD    | Range  |                     |
| <b>Language &amp; Literacy Skills</b>        |                |        |                 |        |             |        |       |        |                     |
| PPVT-III                                     | 267            | 85.55  | 15.07           | 40-130 | 230         | 89.07  | 13.91 | 47-128 | 5.18***             |
| WJ-III Rhyming                               | 267            | 1.01   | 1.70            | 0-9    | 228         | 3.38   | 3.15  | 0-14   | 11.93***            |
| Naming Letters                               | 270            | 0.25   | 0.30            | 0-1.0  | 230         | 0.59   | 0.35  | 0-1.0  | 18.37***            |
| Story & Print Concepts                       | 268            | 2.81   | 1.83            | 0-8    | 229         | 4.79   | 2.39  | 0-10   | 14.56***            |
| <b>Pre-Math Skills</b>                       |                |        |                 |        |             |        |       |        |                     |
| WJ-III Applied Problems                      | 258            | 92.93  | 13.53           | 56-126 | 230         | 93.89  | 11.92 | 50-134 | 2.12*               |
| Counting Bears                               | 265            | 10.78  | 7.45            | 1-40   | 227         | 18.80  | 11.27 | 1-40   | 11.25***            |
| <b>General Knowledge</b>                     |                |        |                 |        |             |        |       |        |                     |
| Social Awareness                             | 270            | 3.77   | 1.58            | 0-6    | 229         | 4.72   | 1.33  | 1-6    | 9.81***             |
| Color Bears                                  | 270            | 15.91  | 5.62            | 0-20   | 230         | 18.66  | 3.15  | 1-20   | 9.61***             |
| <b>Social Skills &amp; Problem Behaviors</b> |                |        |                 |        |             |        |       |        |                     |
| SSRS Social Skills                           | 258            | 101.74 | 14.26           | 57-130 | 236         | 108.89 | 14.13 | 72-130 | 7.83***             |
| SSRS Problem Behavior                        | 271            | 100.68 | 13.49           | 85-138 | 237         | 100.90 | 14.14 | 85-145 | 0.18                |

<sup>1</sup> PPVT – Picture Peabody Vocabulary Test; WJ – Woodcock-Johnson; SSRS – Social Skills Rating System

<sup>2</sup> N = Number of children

<sup>3</sup> SD = Standard deviation measures the variability of a set of scores around their mean.

<sup>4</sup> The t-test measures the statistical significance of the average gains in *More at Four* children's skills between the pre- and posttest using the standard of: less than .05 probability (\*), less than .01 probability (\*\*), or less than .001 probability (\*\*\*) of these results occurring by chance.





## **NC WISE – Fact Sheet**

### **Introduction**

North Carolina Window of Information on Student Education, NC WISE, is a tool for effectively managing student information in North Carolina public schools. It is a Web-based, centrally-maintained system for capturing, accessing, and reporting on a full spectrum of student information. The new system will replace the outdated SIMS (Student Information Management System) and will reduce time, effort, and paperwork.

Recently launched into production for the first set of six local school districts (LEAs), NC WISE is currently in use in 233 of the state's public schools. Its features include:

- Direct and immediate access to a full spectrum of student information at the school, district, and state levels
- Comprehensive set of tools for gathering and processing student and related information that enhances classroom instruction, school business management, accountability, and reporting
- Electronic flow of information between schools and school districts
- Automation of resource-intensive activities, including state-wide reporting and transcript delivery
- More information and functions than SIMS

### **Why it is Needed**

The existing student information system, SIMS, operates on a PC in each school. Being 20 years old, it is inefficient, will not operate on today's computers, and cannot take advantage of the connectivity of the Internet. Additionally, the system is increasingly unstable and is no longer supported by its vendor.

With NC WISE, information is stored centrally. This will allow educators to share information electronically between classrooms, schools, and districts while reporting in a timely manner to state and federal oversight agencies. With SIMS, each school maintains its own database and must manually enter and transfer information or must load it from disks to send to the district or state. Those who use NC WISE will access it over the Internet. With SIMS, the system had to be loaded onto a computer in each school.

SIMS does not provide the tools and information needed to comply with current educational accountability requirements (ABCs Accountability Model, NCLB, etc.). User access to information is also limited with SIMS. If a principal wants data, he/she must ask for information from a data manager. With NC WISE, principals, superintendents, and instructional support personnel (if authorized) can access student data from their computers at their own desk. For instance, if a parent calls with a question or concern, the principal or superintendent can pull up that student's record, view the relevant information, and respond more immediately.

SIMS is designed primarily to support administrative activities in a school. NC WISE, while producing similar administrative and accountability reports, is designed first and foremost to support instruction and enhance a teacher's ability to provide individualized instruction using accurate and up-to-date information about students.

### **Information Available**

More information will be available with NC WISE. Demographic data, course schedules, attendance, grades and marks, health information, discipline actions, and other data will be available. NC WISE also has several built-in functions that were costly additions to SIMS (master schedule builder, teacher grade book, and fee accounting are examples). NC WISE will generate electronic student transcripts to higher education institutions — an action the General Assembly has mandated. NC WISE will replace SIMS as the tool for generating mandated reports such as the Student Activity Report (SAR) and Principal's Monthly Report (PMR), automatically forward these through principals and LEA superintendents for approval, and send the reports to DPI for state funding, program management, and oversight.

NC WISE is a building block for North Carolina's future. Much of the information required by the N.C. State School Report Card, the ABCs Accountability Program, and the new Educational Data Warehouse will be collected, processed and reported through NC WISE. NC WISE will also support fulfillment of N.C. state reporting requirements associated with No Child Left Behind and Closing the Gap.

**Current Program Status**

Six local school districts (LEAs) and 233 schools are actively using NC WISE as a part of a production pilot implementation. DPI is working with the Information Resource Commission and other oversight agencies to resolve all issues raised and lessons learned throughout the pilot phase. It is anticipated that rollout to the initial group of local school systems will begin early in the 2004-2005 school year. Before deployment of NC WISE in each additional LEA, a final "readiness review" will be conducted prior to rollout.

**Learn More**

To find out more about NC WISE, contact the NC WISE Program Team at [ncwise@dpi.state.nc.us](mailto:ncwise@dpi.state.nc.us), or access the NC WISE program website at [www.ncwise.org](http://www.ncwise.org).

Interim Recommendations of the Special Assessment Committee for DPI's NC WISE  
Project to the TAPCC

January 6, 2004 IRMC Meeting  
Revised January 15, 2004

The Special Assessment Committee of IRMC appointed by IRMC Chair Ralph Campbell to study the NC WISE project of the Department of Public Instruction has completed its initial phase work and notes the following actions.

The Superintendent of Public Instruction is in the process of securing a full-time project manager for the NC WISE project with direct reporting responsibilities to the Superintendent and his Deputy. In addition, the State CIO and the Superintendent are developing a work plan that will assign an ETS representative to the NC WISE project to assist with the Planning Phase for this project and be the liaison between this project and the TAPCC. Both actions will be completed no later than January 31, 2004. In addition, the State CIO and the Superintendent have adopted a schedule for monthly meetings specifically to update each other on the NC WISE project and to discuss and resolve issues relative to the Planning Phase of the project. Accordingly, the Committee recommends approval of the NC WISE Planning Project subject to the following conditions:

**General Actions:**

1. **That a complete cost report be made available to the TAPCC no later than its February 2004 meeting.** The report should detail the estimated cost of the NC WISE project through completion, including the total cost to the State for implementation and funds availability to support this cost; the costs to school systems for connecting to the system and funds available to support this cost; and the annual operating costs to the State and to the school systems utilizing the system. (It is recognized that these costs will be preliminary estimates that will be revised and refined from the planning project work; therefore, a level of confidence should be provided for major cost items.)
2. **That DPI revisit the current contract with current vendor with a goal of including in the contract performance measures prior to making progress payments as required under the current contract.** As part of this action, the work order for NC WISE Statewide Deployment Planning covering the period of November 1, 2003 to June 30, 2004 should be revised to include specific deliverables (with acceptability criteria and due dates) matched to vendor payments. This work order should be available for review by the Special Assessment Committee no later than January 31, 2004.
3. **That no further action be taken beyond the planning phase on this project until it returns to the TAPCC for full certification for statewide rollout with the complete rollout plan.** A Project Readiness Assessment will be conducted by ETS prior to the TAPCC's review for statewide rollout certification. As a minimum, the Readiness Assessment will include the verification of the following:



- Successful completion of system testing, including functionality, performance, security, stress, and scalability.
  - Assessment of connectivity and bandwidth capabilities at the school level, including the costs to provide this capability where it currently does not exist.
  - Assessment of the pilot sites to determine the level of satisfaction with the functional and operational capabilities of the system.
  - Assessment of the project team infrastructure (including help desk systems and personnel, training components and personnel, communications monitoring capabilities, hosting arrangements, security planning and response, business continuity/disaster recovery processes and resources, etc.) for performing the rollout and supporting the operational sites.
  - Assessment of the strategies and plans for statewide rollout to ascertain reasonableness of achievability, including project staffing, practicality of timetables, school hardware and connectivity readiness, training capabilities, data conversion processes and facilities, adequacy of security measures, and affordability.
4. **That a timetable be developed for completion of the TAPCC/IRMC requirements for certification of the statewide rollout by January 31, 2004.** The timetable should indicate when the items in Number 3 above will be ready for verification in the Readiness Assessment and when items a through p in Number 1 below will be completed and ready for review.

#### **Planning Phase Actions:**

1. **Develop NC WISE Statewide Deployment Strategy & Plan** -- This preparation for statewide deployment includes the development of a detailed NC WISE statewide deployment plan; including the development of plans for:
  - a. Revision of the Project Charter
  - b. LEA Deployment Strategy
  - c. Training Strategy
  - d. Testing Strategy
  - e. Security Strategy (Detailed Risk Assessment of Potential Vulnerabilities With Mitigation Approaches and Plans)
  - f. Business Continuity/Disaster Recovery Strategy (Detailed Risk Assessment of Potential Causes of System Interruptions with Mitigation Approaches and Plans)
  - g. Statewide Infrastructure Migration
  - h. Data Conversion

- i. Communications
- j. Help Desk
- k. Network Monitoring
- l. Application Testing
- m. Integration Layer Strategy
- n. Deployment Schedule
- o. Post Production Support
- p. NC WISE User Acceptance Testing (Detailed Plan That Includes Functionality, Performance, Stress, and Scalability Testing)

The results of the planning effort will define the necessary tasks that need to be accomplished and the necessary steps that need to be taken to ensure a successful accelerated deployment.

Phase I pilots provided a significant base of information that is incorporated into the plan.

2. **Perform Statewide Pre-Deployment Services** – Various assessments to include connectivity and bandwidth capabilities at the LEA/School (most appropriate) level (with approaches and costs for providing the required connectivity), satisfaction assessment of current operational sites, security assessments, and overall readiness assessments for those LEAs planned for FY05 rollout.
3. **Perform Application Development Services** – Development efforts to complete needed enhancements to the NC WISE solution. NC WISE team must complete, prior to beginning statewide rollout, all required modifications to the application as stated in the Requirements Traceability Matrix. UERS code will continue to be enhanced as required to meet the requirements for statewide rollout. NC WISE team will continue to test the new releases of the eSIS application and the UERS code throughout the planning phase, to include functionality, performance, security, scale, and stress testing.
4. **Provide Production Support Services** – NC WISE team will provide network monitoring, which includes capacity management, traffic management, bandwidth management, network maintenance, or similar services. NC WISE team will also transition to the hosted environment.



## Summary of Cost Estimates to Deploy NC WISE

| Cost Category |                                                                  | Cost to Date<br>July 1998 - Dec 2003 | Final Planning<br>Costs Jan - June<br>2004 | Implementation<br>Costs July 2004 -<br>June 2010 | Total New Costs                                                  |                      |
|---------------|------------------------------------------------------------------|--------------------------------------|--------------------------------------------|--------------------------------------------------|------------------------------------------------------------------|----------------------|
|               |                                                                  |                                      |                                            |                                                  | Local Govt                                                       | State                |
| A             | PWC/IBM Contract                                                 | \$ 36,552,361                        | \$ 4,500,000                               | \$ 71,925,000                                    |                                                                  | \$ 76,425,000 Note 1 |
| B             | Other Contracted Personnel Services                              | 2,526,743                            | 1,318,229                                  | 4,250,296                                        |                                                                  | 5,568,525 Note 1     |
| C             | Hardware, Software and Hosting                                   | 3,581,639                            | 1,907,108                                  | 28,354,378                                       |                                                                  | 30,261,486 Note 1    |
| D             | DPI Internal Costs                                               | 4,862,769                            | 619,861                                    | 7,030,055                                        |                                                                  | N/A Fixed Note 2     |
| E             | Upgrade Costs to Local Education Agencies and<br>Charter Schools |                                      |                                            | 63,780,076                                       | Estimate to be refined as part of<br>readiness assessment Note 3 |                      |
| F             | Security & On-going system operation post-<br>Implementation     |                                      |                                            |                                                  | Related cost categories not yet<br>Included                      |                      |
| G             | Contingency                                                      |                                      | 360,000                                    | 7,192,500                                        |                                                                  | 7,552,500            |
| Total         |                                                                  | \$ 47,523,511                        | \$ 8,705,198                               | \$ 182,532,305                                   | \$ -                                                             | \$ 119,807,511       |

**Cost Category Descriptions:**

A. Self-explanatory

B. Other Contracted Personnel Services: Contracts for project management, quality assurance reviews, help desk and other technical support

C. Hardware, Software, Hosting &amp; Contingency: hardware and software to host NCWISE and provide disaster recovery.

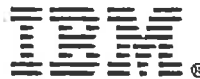
D. DPI Internal Cost: Direct costs include 12.34 FTE at DPI who are currently assigned to the NCWISE project. Indirect cost associated with the project (DPI personnel not directly assigned to the project) is based on 20% of the direct costs.

**Notes:**

Note 1: Funding supported by \$19.8 million annual state appropriation for UERS (excess funds are used to support other departmental technology requirements). The DPI is working with a grant specialist to identify the applicable project costs that can be charged to specific federal grants (percentage or direct charge).

Note 2: DPI's operational budget includes funding to support these cost.

Note 3: Estimated upgrading cost for connectivity, equipment, and personnel to operate system at recommended performance level. This is only a statement of the cost, a portion of which will be paid for from current state, federal and local resources. It is an estimate pending completion of the readiness assessment currently underway.



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1 Alhambra Plaza  
Coral Gables, FL 33134

January 23, 2004

Dr. Michael Ward  
State Superintendent of Public Instruction  
North Carolina Department of Public Instruction  
6301 Mail Service Center  
Raleigh, North Carolina 27695-6301

Dear Superintendent Ward:

Thank you for the time you, State Auditor Ralph Campbell, State Controller Robert Powell, and State CIO George Bakolia spent with us today to discuss the NC WISE project. I hope all of you came away from our meeting with a clear understanding that IBM is fully committed to a successful, on-time implementation of NC WISE. Bruce Caswell, IBM Business Consulting Services Government Industry Executive, and Andy Bernardin, Southeast USA Education Industry Executive, and I want to assure you we plan to do all in our power to address any and all concerns you and your team have about IBM's commitment and accountability to deliver a successful implementation. There were some specific points that came up in our meeting that I would like to address directly.

- 1) IBM will begin working immediately with your staff and other State officials to revise the existing contract language to better define deliverables and timelines. We agreed that these revisions would be in two parts. The first revisions will address portions of the contract that deal with the planning phase and the second revisions will address portions of the contract that deal with statewide rollout. Our objective will be to provide DPI with the information necessary to permit it to readily determine whether the project deliverables meet acceptance criteria and whether the project is on schedule. After our meeting this morning I asked the IBM team to start work on this task today. In addition, and to show you our sincere level of commitment, I have rearranged my personal calendar and plan to return to North Carolina early next week to actively lead and participate with you and the appropriate State officials in this activity. We understand your concerns and realize this is a critical task that demands immediate attention and action. We intend to address all of your concerns in this area immediately and to your satisfaction by February 19, 2004.
- 2) IBM will finalize work already underway with your staff and other State officials on the "Working Document" that has more detail on the deliverables and timetables. Specifically, our intention is to make certain we have all of the detailed contract performance measures, deliverable details with acceptability criteria and due dates that you desire incorporated into the Planning Phase Work Order which is under joint revision between our two teams. Before I left your office today, David Taylor informed me he was only waiting for some final feedback from the ETS team and then he would be able to finalize the Work Order. Barring no unforeseen issues, we expect to be able to deliver those documents to you Monday morning, January 26th, if not sooner.



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3) Given the critical importance of this Planning Phase, IBM will continue to find and make available the best-and-brightest skills to this engagement. This includes IBMers as well as contractors. We also will provide you our overall Contractor management process so that it is clear how we obtain and manage them. We understand how vital it is that we all put our best foot forward in the coming weeks and next few months, so you can rest assured that Bruce, Andy and I will be actively involved in monitoring progress very regularly.

4) We agree with your and George's idea that the Executives attending the meeting today should monitor progress regularly over the next few months in a formalized way. As such, you can count on our active participation in checkpoint meetings that your assistant is setting up. In addition, as was the case for this meeting, at any time that you feel we need additional executive focus you can rely on the fact that all of the IBM executives present today will rearrange our calendars to the best of our ability to be there to support you and the State.

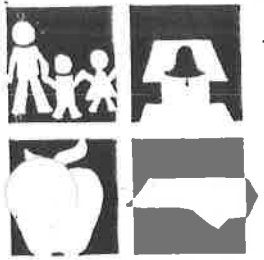
As Bruce stated, this project has IBM's top priority focus. Additionally, IBM understands that NC WISE is vital to the educational funding for all of the schools in North Carolina and instructional management of 1.3 million students' academic success factors. Nothing is more vital on this account than the management of the information critical to the educational progress of each of North Carolina's student's achievement and learning. We are committed to the North Carolina Department of Public Instruction's goals for student achievement.

I am confident that the actions outlined above, as well as the overall team attitude of moving forward will provide you and other senior State officials a renewed feeling of confidence. I look forward to working with you and your team further next week. Thanks again for spending time with us today.

Sincerely,

A handwritten signature in black ink, appearing to be "Michael S. Fuller", with a long horizontal line extending to the right.

Michael S. Fuller  
Vice President & Global Education Industry Executive  
IBM Business Consulting Services



# Public Schools of North Carolina

State Board of Education  
Howard N. Lee, Chairman

Department of Public Instruction  
Michael E. Ward, State Superintendent

<http://www.ncpublicschools.org>

**TO:** Ralph Campbell, Robert Powell, George Bakolia  
**FROM:** Mike Ward *MW*  
**SUBJECT:** IBM Contract Revision  
**DATE:** January 29, 2004

Please find attached a letter from IBM senior executives indicating their commitment to revisit the NCWISE contract. I believe that the letter addresses the issues and concerns that we voiced during our January 23, 2004 meeting with IBM executives Mike Fuller, Bruce Caswell, and Andy Bernardin. You will note that the letter includes a commitment to resolve these contract issues by February 19, 2004. This memorandum describes the process for contract revision during the next few weeks.

## Working Team

In order to move this process along, a working team needs to be involved. The working team involved in negotiating the state's interests will include the following representatives:

- Janice Davis, working team chair
- DPI NC Wise team members, including Bob Bellamy, Luke Andersen, Elaine Glass, Benny Hendrix
- DPI finance/purchasing team members, including Philip Price, Larry McLamb, and Becky McConkey
- State CIO staff members, including Mike Fenton, Tom Runkle, and Patti Bowers
- State Budget Office staff members, including Anne Bander and Elizabeth Grovenstein
- Attorney General's staff members, including Tom Ziko and a contract specialist

## Final Review

The parties who will be asked to advise during final review of contract revisions will include:

- Information Resource Management Commission
- George Bakolia. Office of the CIO staff as needed.
- Robert Powell
- David McCoy and/or Charles Perusse
- Patti Bowers, as needed
- State Purchasing and Contracts Office
- A senior member of the legislative fiscal research staff
- A senior member of the Attorney General's management team
- Tom Ziko and contract lawyer, as needed
- Other members of the working team, as needed

Memo  
January 29, 2004  
Page 2

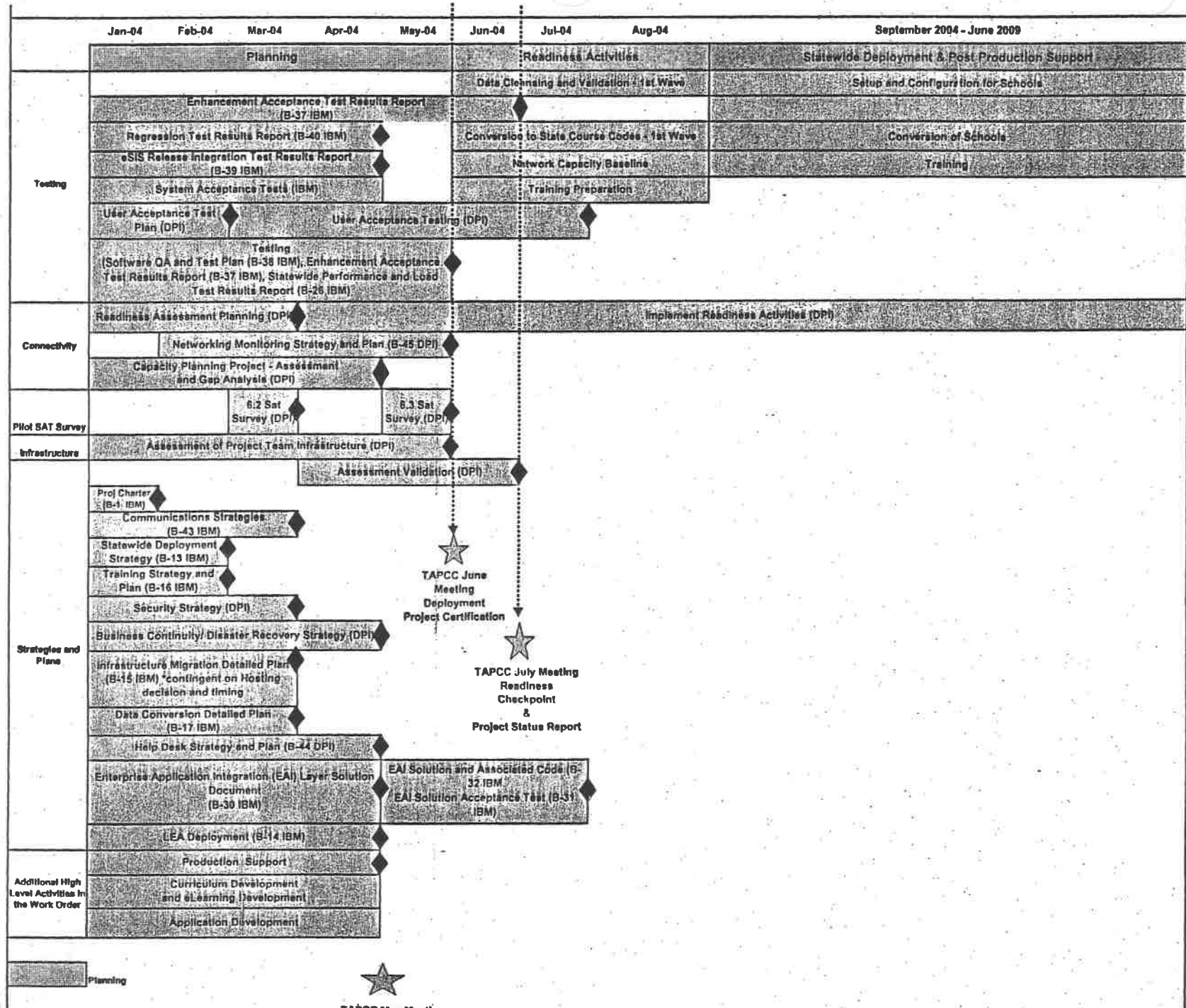
**Executive Team**

The following individuals will make up the executive team that will approve the final provisions:

- Mike Ward
- Howard Lee

Thank you for your attention to these matters. Please let me know if you would like additional information.

**Key Milestones  
Jai**      **ed to NC WISE Phases  
1 #3 Bullets**





**Key Milestones - Aligned to NC WISE Phases**  
**Jan. 6, Item #3 Bullets**

|  |                      |
|--|----------------------|
|  | Readiness Activities |
|  |                      |
|  | Statewide Deployment |

TAPCC May Meeting  
Planning Project Sign-Off  
Project Status Report

## Draft Deliverable Alignment to Payment Schedule\*

| Number | Deliverable                                         | Del. # | Responsible Party | Assist Party | IRMC Motion Reference | Project Due Date | ETS Due Date | IBM Payment Date |
|--------|-----------------------------------------------------|--------|-------------------|--------------|-----------------------|------------------|--------------|------------------|
| 1      | NC WISE Project Deliverable Definition              | B-3    | IBM               | NCDPI        | Planning 1A           | 5-Jan-2004       |              | 20-Mar-2004      |
| 2      | NC WISE Project Plan and Work Breakdown Structure   | B-11   | IBM               | NCDPI        | Planning 1A           | 5-Jan-2004       |              | 20-Mar-2004      |
| 3      | Statewide Deployment Strategy and Planning Document | B-13   | IBM               | NCDPI        | Planning 1B           | 5-Jan-2004       |              | 20-Mar-2004      |
| 4      | Template LEA Assessment Document                    | B-18   | IBM               | NCDPI        | Planning 1B           | 5-Jan-2004       |              | 20-Mar-2004      |
| 5      | Template LEA Deployment Agreement                   | B-20   | IBM               | NCDPI        | Planning 1B           | 5-Jan-2004       |              | 20-Mar-2004      |
| 6      | NC WISE Project Charter                             | B-1    | IBM               | NCDPI        | Planning 1A           | 12-Jan-2004      |              | 20-Mar-2004      |
| 7      | NC WISE Milestone List                              | B-5    | IBM               | NCDPI        | Planning 1A           | 12-Jan-2004      |              | 20-Mar-2004      |
| 8      | NC WISE Risk Management Plan                        | B-9    | IBM               | NCDPI        | Planning 1I           | 12-Jan-2004      |              | 20-Mar-2004      |
| 9      | NC WISE Training Detailed Plan                      | B-16   | IBM               | NCDPI        | Planning 1C           | 15-Jan-2004      |              | 20-Mar-2004      |
| 10     | NC WISE Project Definition Document                 | B-2    | IBM               | NCDPI        | Planning 1A           | 19-Jan-2004      |              | 20-Mar-2004      |
| 11     | NC WISE Configuration Management Plan               | B-6    | IBM               | NCDPI        | Planning 1D           | 19-Jan-2004      |              | 20-Mar-2004      |
| 12     | NC WISE Communications Plan                         | B-43   | IBM               | NCDPI        | Planning 1I           | 20-Jan-2004      |              | 20-Mar-2004      |
| 13     | NC WISE Quality Assurance Plan                      | B-42   | IBM               | NCDPI        | Planning 1L           | 26-Jan-2004      |              | 20-Mar-2004      |
| 14     | Networking Monitoring Strategy and Plan             | B-45   | NCDPI             | IBM          | Planning 1K           | 29-Jan-2004      |              | 20-Mar-2004      |
| 15     | Template LEA Evaluation Report                      | B-19   | IBM               | NCDPI        | Planning 1B           | 31-Jan-2004      |              | 20-Mar-2004      |

\* Does not reflect actual cost of Deliverable.

## Draft Deliverable Alignment to Payment Schedule\*

| Num<br>ber | Deliverable                                           | Del. # | Responsible<br>Party | Assist<br>Party | IRMC<br>Motion Reference | Project<br>Due Date | ETS<br>Due Date | IBM<br>Payment Date |
|------------|-------------------------------------------------------|--------|----------------------|-----------------|--------------------------|---------------------|-----------------|---------------------|
| 16         | UERS Architecture Consolidation<br>Solutions Document | B-27   | IBM                  | NCDPI           | Planning 1M              | 16-Feb-2004         |                 | 20-Mar-2004         |
| 17         | NC WISE Infrastructure Migration<br>Detailed Plan     | B-15   | IBM                  | NCDPI           | Planning 1G              | 16-Feb-2004         |                 | 20-Mar-2004         |
| 18         | NC WISE Data Conversion Detailed<br>Plan              | B-17   | IBM                  | NCDPI           | Planning 1H              | 18-Feb-2004         |                 | 20-Mar-2004         |

\* Does not reflect actual cost of Deliverable.

## Draft Deliverable Alignment to Payment Schedule\*

| Number | Deliverable                                                         | Del. # | Responsible Party | Assist Party | IRMC Motion Reference | Project Due Date | ETS Due Date | IBM Payment Date |
|--------|---------------------------------------------------------------------|--------|-------------------|--------------|-----------------------|------------------|--------------|------------------|
| 19     | LEA Deployment Detailed Plan                                        | B-14   | IBM               | NCDPI        | Planning 1N           | 1-Mar-2004       |              | 1-Jul-2004       |
| 20     | Help Desk Strategy and Plan                                         | B-44   | NCDPI             | IBM          | Planning 1J           | 11-Mar-2004      |              | 1-Jul-2004       |
| 21     | NC WISE Regression Test Results Report                              | B-40   | IBM               | NCDPI        | Planning 1L           | 1-Apr-2004       |              | 1-Jul-2004       |
| 22     | NC WISE Phase II Software QA and Test Plan                          | B-38   | IBM               | NCDPI        | Planning 1L           | 1-Apr-2004       |              | 1-Jul-2004       |
| 23     | eSIS Release Integration Test Results Report                        | B-39   | IBM               | NCDPI        | Planning 1L           | 1-Apr-2004       |              | 1-Jul-2004       |
| 24     | NC WISE Phase II Enhancement Solution Document                      | B36    | IBM               | NCDPI        | Planning 1M           | 12-Apr-2004      |              | 1-Jul-2004       |
| 25     | NC WISE Enterprise Application Integration Solution Document        | B-30   | IBM               | NCDPI        | Planning 1M           | 30-Apr-2004      |              | 1-Jul-2004       |
| 26     | NC WISE/CECAS Interface Solution Document                           | B-33   | IBM               | NCDPI        | Planning 1M           | 17-May-2004      |              | 1-Jul-2004       |
| 27     | UERS Architecture Consolidation System and Integration Test Results | B-28   | IBM               | NCDPI        | Planning 1M           | 26-May-2004      |              | 1-Jul-2004       |

\* Does not reflect actual cost of Deliverable.

## Draft Deliverable Alignment to Payment Schedule\*

| Number | Deliverable                                                         | Del. # | Responsible Party | Assist Party | IRMC Motion Reference | Project Due Date                          | ETS Due Date | IBM Payment Date |
|--------|---------------------------------------------------------------------|--------|-------------------|--------------|-----------------------|-------------------------------------------|--------------|------------------|
| 28     | Template LEA End User Training Evaluation Report Template           | B-22   | IBM               | NCDPI        | Planning 1C           | 15-Jun-2004                               |              | 20-Sep-2004      |
| 29     | UERS Architecture Consolidation Solution and Associated Source Code | B-29   | IBM               | NCDPI        | Planning 1M           | 25-Jun-2004                               |              | 20-Sep-2004      |
| 30     | NC WISE Solution Training Curriculum and Training Materials         | B-21   | IBM               | NCDPI        | Planning 1C           | 30-Jun-2004                               |              | 20-Sep-2004      |
| 31     | Data Validation/Conversion Routines                                 | B-23   | IBM               | NCDPI        | Planning 1H           | 30-Jun-2004                               |              | 20-Sep-2004      |
| 32     | Template LEA Data Conversion Report                                 | B-25   | IBM               | NCDPI        | Planning 1H           | 30-Jun-2004                               |              | 20-Sep-2004      |
| 33     | NC WISE Phase II Enhancement Acceptance Test Results Report         | B-37   | IBM               | NCDPI        | Planning 1L           | 1-Jul-2004                                |              | 20-Sep-2004      |
| 34     | Converted LEA Data                                                  | B-24   | IBM               | NCDPI        | Planning 1H           | 07/01/2004 - 06/30/2007                   |              |                  |
| 35     | Statewide Performance and Load Test Results Report                  | B-26   | IBM               | NCDPI        | Planning 1P           | Plan - 03/15/2004<br>Results - 06/16/2004 |              | 20-Sep-2004      |

\* Does not reflect actual cost of Deliverable.

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## Draft Deliverable Alignment to Payment Schedule \*

| Number | Deliverable                                                             | Del. # | Responsible Party | Assist Party | IRMC Motion Reference | Project Due Date                                                                | ETS Due Date | IBM Payment Date |
|--------|-------------------------------------------------------------------------|--------|-------------------|--------------|-----------------------|---------------------------------------------------------------------------------|--------------|------------------|
| 36     | NC WISE Issue Management Log                                            | B-8    | IBM               | NCDPI        | Planning 1I           | 01/05/2004 and be maintained on a weekly basis thereafter.                      |              |                  |
| 37     | NC WISE Project Workbook                                                | B-4    | IBM               | NCDPI        | Planning 1A           | End of each month starting 01/2004                                              |              |                  |
| 38     | NC WISE Weekly Status Report                                            | B-7    | IBM               | NCDPI        | Planning 1I           | Monday preceding the DPI status meetings.                                       |              |                  |
| 39     | NC WISE Monthly Production Status Report                                | B-41   | IBM               | NCDPI        | Planning 1O           | Monthly                                                                         |              |                  |
| 40     | NC WISE Monthly IRMC Status Report                                      | B-10   | IBM               | NCDPI        | Planning 1I           | Monthly, starting 01/2004                                                       |              |                  |
| 41     | NC WISE Enterprise Application Integration Solution and Associated Code | B-32   | IBM               | NCDPI        | Planning 1M           | TBD                                                                             |              |                  |
| 42     | NC WISE Enterprise Application Integration Solution Acceptance Test     | B-31   | IBM               | NCDPI        | Planning 1M           | TBD                                                                             |              |                  |
| 43     | NC WISE/CECAS Interface Acceptance Test Results Report                  | B-34   | IBM               | NCDPI        | Planning 1M           | TBD                                                                             |              |                  |
| 44     | NC WISE/CECAS Interface Solution and Associated Code                    | B-35   | IBM               | NCDPI        | Planning 1M           | TBD                                                                             |              |                  |
| 45     | Quality Review Summary Document                                         | B-12   | IBM               | NCDPI        | Planning 1B           | Within 10 days of the review results being presented to IBM Project Management. |              |                  |

\* Does not reflect actual cost of Deliverable.

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# QTL™ Testimonials

## What Teachers Are Saying

"It was wonderful. It opened doors. It showed so many different ways to do things we were already doing in the classroom and just didn't know how to integrate a computer... Everything we did was based on our curriculum. Everything we did was usable... Every school should have it. Every instructor, teacher, assistant, any staff member should be given the opportunity!"

*Anne Waters, 1st grade teacher*

"I had never thought of turning my kids loose with the high-tech equipment until I went through (QTL)... I came right back to the classroom from training and taught the students what I learned."

*Pat Cook, elementary teacher*

"I saved a lot of class time, if you're worried about accountability and staying on task. They were integrated activities. They were activities that reached the different, the diverse learners. They were activities that could be assessed... We've seen improvement in test scores, of course..."

*Brookie Ferguson, 4th grade teacher*

"I love the program. I feel so much better about using technology now. It gave me so much confidence in myself and the fact that I could do these things. The instructors showed us that you can do it. There are a lot of teachers like me."

*Brenda Lillard, 3rd grade teacher*

"I was very apprehensive. I really did not think my children could benefit from me coming here at all. *But I was completely wrong.* I have learned *so much* that I have used in my classroom!"

*Jennifer Kresicki, Special Education teacher*



# QTL™ Testimonials

## What Teachers Are Saying

"The program is really good because you get a lot of professional growth, but it's professional growth that you can relate to your students."

*Thelma Finch, Pre-K teacher*

"I just didn't have the background (for making use of technology). It wasn't that I didn't want to, I just didn't have background. I feel like a whole new arena has opened up for me!"

*Michele Aydlett, elementary teacher*

"I'm not necessarily technologically savvy so I had a lot of apprehensions and I was a little concerned. However, when we underwent the process it was so user-friendly and even the materials presented were child-friendly that, you know, within the morning of the first day I became comfortable and our programs were very interesting. I came out with a wealth of knowledge. It's very interesting, very good."

*Joan White, K-2 teacher*

"We've had extensive technology training to some degree and some of it has been repetitious, but this was not. This was very interesting... it wasn't just 'we're going to learn technology — we're going to learn how to use technology to enhance student achievement.' And that was the real difference... It's an educational tool not only to increase student achievement, but *my* achievement as well."

*Tracy Gregory, K-2 teacher*

"You feel more professional to get with other teachers and share ideas."

*Diane Anderson, 4th grade teacher*

"Wonderful. Absolutely wonderful."

*Karen Flippen, 4th grade teacher*

# QTL™ Testimonials

## What Administrators Are Saying

"As I've talked with teachers they say learning has become more enjoyable for their children. And learning has become something that has turned children on. They're learning better, they're learning faster. I think student achievement has improved as a result of the *QTL Center*... this program has reduced the cost considerably for what we needed and wanted to do... I'm a total advocate for the program!"

*Dr. William B. "Bill" McMillan, Jr. — director, Sandhills Consortium*

"Teachers have got to realize that children have to be stimulated. Technology is not the answer, it is simply a tool that enables us to meet the needs of the child. (*QTL*) helps the students by helping the teachers."

*Phillip Ferrell, elementary principal*

"It is great training. It is immediate. Teachers take whatever they've done in training and they take it straight back into the classroom. They put the posters up and they start managing their students better, they start looking at their students more critically, looking for ways they can make learning better for each child individually, because their awareness has been heightened."

*Rita Booth, elementary media specialist*

"It focused on curriculum. It provided classroom strategies for the teachers. It incorporated new designs for learning and it incorporated a lot of the components of *NCLB* legislation. I really wanted to have this for our teachers to learn here in Guilford County, and it's been a great program for them. It's working really, really well... every school that we train, when we train one team we're finding they want to send the second and third and fourth team."

*Zelia Frick, instructional technology supervisor*

"Going through (*QTL*) training isn't just about technology, it's also about the teaching strategies that are intertwined in the program. I think it's not only going to help us integrate technology, but it will help make them better teachers."

*Mary Nixon, elementary principal*

# QTL™ Testimonials

## What Administrators Are Saying

"Through QTL, we've been able to expose (teachers) to different strategies, programs. They've been more relaxed. When they go through the training they can go right back to the classroom and put into practice what they have learned. They're able to incorporate project-based learning, constructivist, cooperative learning... all the different things they've been exposed to, they can take it right back into the classroom and use it with their students."

*Cynthia Stallings, technology facilitator*

"Our staff has bought into the idea of using technology across the classroom and into the curriculum. It gave them another door to open as far as giving students opportunities to learn and different teaching methods they haven't used in the past. It's shared another avenue they could use for strategies and ways to get the experiences in the classroom."

*Billy Stallings, elementary principal*

"It's been one of the most beneficial programs we've ever implemented in terms of staff development for teachers. The absolute hands-on experience and types of knowledge that they come out of that experience with is unsurpassed."

*Ken Wells, school system superintendent*

"(QTL) has given teachers realistic goals. They are able to integrate technology into science, social studies, & reading."

*Candie McPherson, Elementary Principal*

"They come in thinking it's all going to be computers, and they leave feeling more collaborative, with more teamwork among their peers when they go back to their schools. They feel like they are more comfortable weaving in some of the Best Practices and new learning."

*Susan Herring, QTL Instructor*

"...it's a place where people are learning... and the computers are part of that, but they're not the only part. Learning is the priority. The people who've been to this training say this is the best technology training they've ever been to."

*Victor Eure, school system technology coordinator*



## The Centers for Quality Teaching & Learning™

### Impact of QTL™ on Participants: Preliminary Year 2 Results 2003

The goal of ExplorNet's Centers for Quality Teaching and Learning (QTL™) is to prepare teachers to improve student learning by implementing research-based instructional practices in a technology-enriched environment.

Preliminary results from the Year 2 evaluation<sup>1</sup> show that, even before teachers finish their participation in the program, QTL™ is increasing their capacity to support student learning. Participants are significantly increasing their knowledge of educational theories and technical skills. They are also changing their use of technology in the classroom to focus on activities supporting higher order learning. Many participants are moving beyond technology and changing their broader instructional practices. QTL™ is also supporting professional learning communities in schools by increasing collaboration among teachers.

#### Impact on Teachers' Use of Research-based Instructional Practices

*Finding: Participants have significantly increased their awareness and knowledge of research-based educational theories and practices.*

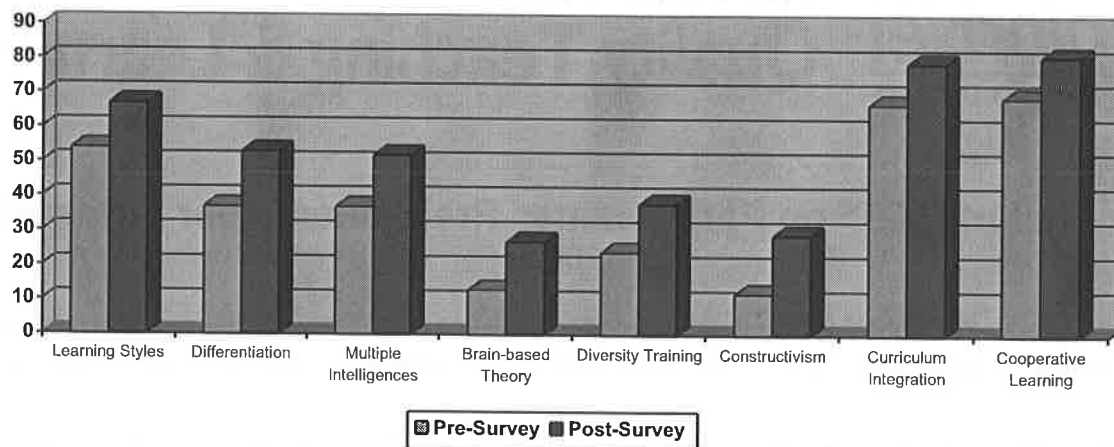
- Participants made the most gains in knowledge and awareness in the areas of: differentiation of instruction, brain-based theory, diversity and constructivism.

Table 1: Change in Scores on Knowledge/Awareness of Educational Theories and Practices

| Educational Theory/ Practice | Percentage of Respondents Selecting Top Two Levels of Awareness/Knowledge |             |          |
|------------------------------|---------------------------------------------------------------------------|-------------|----------|
|                              | Pre-Survey                                                                | Post-Survey | % Change |
| Learning Styles              | 54%                                                                       | 67%         | +24%     |
| Differentiation              | 37%                                                                       | 53%         | +43%     |
| Multiple Intelligences       | 37%                                                                       | 52%         | +41%     |
| Brain-based Theory           | 13%                                                                       | 27%         | +107%    |
| Diversity Training           | 24%                                                                       | 38%         | +58%     |
| Constructivism               | 12%                                                                       | 29%         | +141%    |
| Curriculum Integration       | 67%                                                                       | 79%         | +18%     |
| Cooperative Learning         | 69%                                                                       | 81%         | +17%     |

<sup>1</sup> The data included here come from an analysis of 296 matched pre- and post-surveys completed by participants during Year 2. The surveys include questions on technical skills, pedagogical knowledge, instructional practices, use of technology in the classroom, teachers' professional practices, and an open-ended question on impact. The results are supplemented with comments from a survey on the quality of the training administered on Day 5.

Figure 1: Changes in Participants' Level of Awareness/Knowledge of Educational Theories/Practices



- "My use of various forms of instructional models and methods has been rejuvenated. I was becoming stagnant and was using my comfort zone to teach from all the time. Now I avoid it." –Pitt County, NC participant
- "(QTL™) has caused me to think about learning styles and best practices more when teaching." –Martin County, NC participant

*Finding: QTL™ is moving beyond technology by helping some teachers increase their use of research-based instructional practices in the classroom.* When asked to identify the impact of QTL™ on their instruction, participants commented:

- "I have taken the collaborative and constructivist approaches to revamp my teaching methods. There are now center-based, realia-enhanced units of study instead of lecture-model being my method. I have always tried to incorporate learning in this new way but have never felt as comfortable as I do now."—Pitt County, NC participant
- "(QTL™) has had a positive impact on my instructional practices. I look for ways to make my lessons more open-ended. Having the students work cooperatively to solve problems that don't have a specific solution are activities conducted often in my classroom. I'm always looking for ways to make the children think."—Polk County, NC participant
- "I think of myself as a very traditional teacher. I have started to teach and think outside the box. It is scary and exciting."—Camden County, NC participant
- "I have refocused my instruction to include a variety of teaching techniques and to empower students more. Technology is a welcomed tool and not something that has to have a separate planned lesson."—Martin County, NC participant

*Finding: Participants are building a professional community through increased collaboration with other teachers.*

- The percentage of participants collaborating on technology issues monthly or more frequently increased significantly from 62% to 73%.
- "It has led me to find ways to make the technology available to my students (grants). It has also gave me the time to collaborate with my peers to create a project to incorporate more technology in to my class room."—Harnett County, NC participant
- "I have a focus on integration. I plan more with the teachers and find out more about what they are doing with their classes so I can create technology lessons based on their themes and focus." –Polk County, NC participant

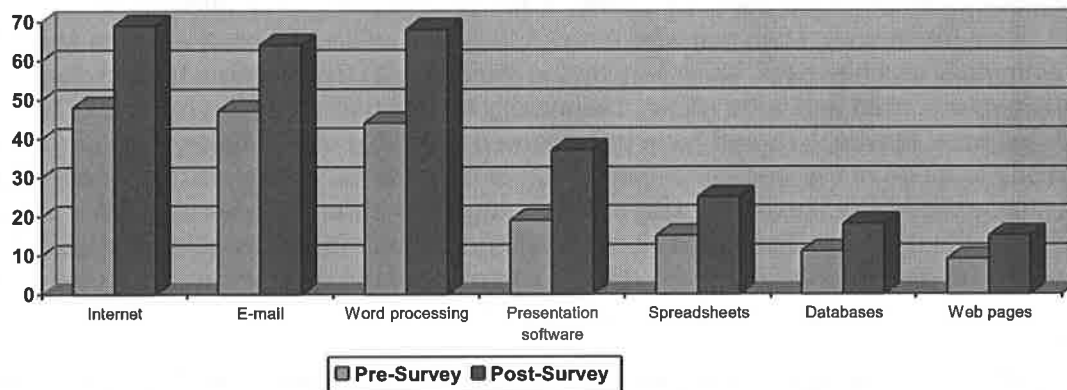
## Impact on Teachers' Use of Technology in the Classroom

*Finding: Participants demonstrated a dramatic increase in technical skills and in their comfort level using technology, both key precursors to using technology to support student learning.*

**Table 2: Change in Participants' Reported Technical Skills**

| Technical Skills      | Percentage reporting they could teach someone else to do this skill |             |          |
|-----------------------|---------------------------------------------------------------------|-------------|----------|
|                       | Pre-Survey                                                          | Post-Survey | % Change |
| Internet              | 48%                                                                 | 69%         | +44%     |
| E-mail                | 47%                                                                 | 64%         | +36%     |
| Word processing       | 44%                                                                 | 68%         | +55%     |
| Presentation software | 19%                                                                 | 37%         | +95%     |
| Spreadsheets          | 15%                                                                 | 25%         | +67%     |
| Databases             | 11%                                                                 | 18%         | +64%     |
| Create web pages      | 9%                                                                  | 15%         | +67%     |

**Figure 2: Change in Participants' Technical Skills**



- The percentage of participants identifying personal knowledge and skills as a barrier to incorporating technology in their classroom dropped almost 50%, from 31% on the pre-survey to 16% on the post-survey.
- "I am motivated to use technology more because I feel confident with the skills I have acquired through (QTL™)." -Durham County, NC participant.
- One Mitchell County participant commented on the impact of the program, "I have been using the computer more this year than ever. My children are expected to use computers for writing, research, and many other tasks. Previously, I needed a confidence boost before I would even enter the computer lab. Now, I feel that I can conduct a basic lesson with a high degree of confidence."
- "I am more willing to have the students develop technological projects with me—before I was a bit unsure and didn't want to "waste" their time; now I feel confident to "fix" problems and we work together." -Pender County, NC participant
- Another Mitchell County participant commented, "(QTL™) has improved my confidence level therefore, I feel more comfortable using technology with my children. I have been and will continue

to use the programs that I learned about in this training. My children have also been researching classroom topics on the Internet. I have found that many have computers at home and they enjoy having assignments that must be completed on the computer."

*Finding: Participants are changing the way they think about using technology in the classroom, particularly in the use of technology to help students learn to work cooperatively with others. They are also decreasing their emphasis on using technology to acquire basic skills.*

- Survey results show a significant change in teachers' beliefs about technology in the classroom. For example, after participation in QTL™, teachers are more likely to agree with the statement, "Technology helps students learn to work cooperatively." This was also reflected in teachers' objectives for technology use. On the pre-survey, only 17% of participants identified "Learning to Work Collaboratively" as one of their top three objectives for using technology in the classroom. This increased to 26% on the post-survey.
- Participants are less likely to agree with the statements, "Technology is best used for improving basic skills" and "Technology should be used only when there is extra time." This was also reflected in a decreasing percentage of teachers choosing mastering skills and remediation of skills as key objectives for technology use. On the pre-survey, 42% chose remediation and 39% chose mastering skills as one of their top three objectives for using technology, down to 35% and 32% respectively on the post-survey.
- One participant commented on the post-survey, "I am more relaxed when allowing students to do research using technology; I can see where technology far out-weighs so much time spent on basic skills. Technology touches basic skills leaving the student with the freedom to help choose his own interest to explore, read and write about. Technology makes math tangible instead of black and white worksheets. Maybe, I, myself have truly learned the value of technology for learning and am finally willing to let go of the traditional instruction of basic skills." --Mitchell County participant
- "I am focusing more instruction on the use of computers, and different ways to use the computers. Another impact is that I am incorporating more technology into my classroom and not just waiting for our once a week computer lab time. (QTL™) has allowed me to focus my computer centers for more than skill and drill."—Harnett County participant

*Finding: Participants are changing the way they use technology in the classroom. They are increasing their use of technology as a tool for improving student learning.*

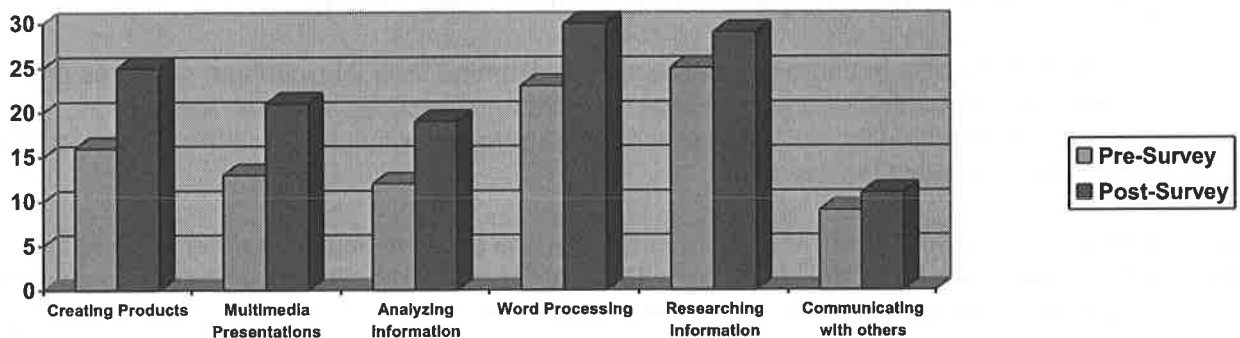
- Participants significantly increased their use of technology as a tool for student learning. The most significant changes occurred in the use of technology to support higher order learning such as multimedia presentations, creating projects, and data analysis.



Table 3: Increase in Use of Technology as a Tool

| Use of technology               | Percentage of participants whose students use technology in this way more than 30 min/week |             |          |
|---------------------------------|--------------------------------------------------------------------------------------------|-------------|----------|
|                                 | Pre-Survey                                                                                 | Post-Survey | % Change |
| Creating products for a project | 16%                                                                                        | 25%         | +56%     |
| Multimedia presentations        | 13%                                                                                        | 21%         | +62%     |
| Analyzing information           | 12%                                                                                        | 19%         | +58%     |
| Word processing                 | 23%                                                                                        | 30%         | +30%     |
| Researching information         | 25%                                                                                        | 29%         | +16%     |
| Communicating with others       | 9%                                                                                         | 11%         | +22%     |

Figure 3: Changes in Use of Technology as a Tool



➤These results are supported by participants' comments on the impact of QTL™ on their use of technology in the classroom:

- "(QTL™) has impacted my classroom by showing me other instructional opportunities that I had not thought about. It made me realize that my students can do more hands on activities and facilitate their own learning with technology. Since I had the (QTL™) training my students have been using digital cameras to document learning opportunities. I've also learned inventive ways to use computer software that I had not previously thought about. My students have also become more comfortable teaching their peers and parents about digital cameras, computers, and other uses for technology." –Pasquotank County, NC participant
- "In the past, I have not allowed my students to use the computer lab until much later in the year. As of now, my students have already visited the lab and our class has used Kid Pix to make a class book. Students have also used computer software during center time. We have used the digital camera several times this year, and now I am now planning other ways to incorporate technology in my classroom." –Martin County, NC participant
- "(QTL™) has had a wonderful impact on the instructional practices in my classroom. I am already using computers as a type of remediation in my classroom, but now I'm hoping to use technology as a teaching tool. I see so many other opportunities to use technology in my classroom as a result of attending (QTL™)." –Halifax County, NC participant



## Conclusions

The results presented above are only preliminary, focusing on changes participants made during the first six days of the program. Additional data currently being collected look at participants' changes several months after participating in the program as well as the results from educators who participated one year ago. Despite the preliminary nature of the data reported here, the results are very positive. Even in its first six days, the QTL™, program is increasing the capacity of teachers to improve student learning. It does this in several inter-related ways:

- QTL™ increases participants' technical skills and knowledge of research-based instructional practices. These skills and knowledge are necessary precursors to any changes in teachers' instructional practices.
- The blending of educational strategies with technology results in teachers who are better at integrating technology throughout their instruction, using it as a tool to support more advanced student learning.
- The QTL™ Model also encourages teachers to re-examine their instructional practices and incorporate research-based educational theories and practices into their instruction.
- The program is facilitating the development of learning communities in schools by increasing collaboration among teachers.

"(QTL™) has made teaching and learning exciting. The use of technology and other sources has allowed a renewal with teacher and with the students." –*Guilford County participant, working in a special program with students who had failed the 5<sup>th</sup> grade end-of-course test.*



The Centers for  
**Quality Teaching & Learning™**

# QTL™ Theories & Strategies

## The Impact on Student Achievement

QTL™ incorporates educational theories and practices that have been shown to have a significant impact on student achievement. The table below describes the impact on student achievement when teachers use these strategies in their classroom. Teachers need a repertoire of instructional practices to apply in different instructional situations; therefore, QTL™ provides an overview of many of the most effective strategies.

| <b>Educational Theory/Practice Incorporated in QTL™</b>                                                                                                                                                            | <b>Research on Impact on Student Achievement</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <b>Examples of the Theory/Practice in Action</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Cooperative Learning:</b> Small groups of students working together through interactive instructional procedures.                                                                                               | Students working together in groups showed average gains of 27 percentile points compared to students working on individual projects (Marzano, Pickering, and Pollock, 2001).                                                                                                                                                                                                                                                                                                                                                                         | <ul style="list-style-type: none"> <li><input type="checkbox"/> The majority of QTL™ activities have participants working in groups of 2 or more.</li> <li><input type="checkbox"/> Instructors use management strategies to organize cooperative learning.</li> <li><input type="checkbox"/> Participants complete a final collaborative project as a group.</li> </ul>                                                                                                                                             |
| <b>Brain-based learning:</b> Learning theory that uses neurological research on how students receive, process, and interpret information to change the way learning is structured for students.                    | Helping students make connections to previous learning through cues, questions, and advance organizers improves student achievement by 22 percentile points. Using non-linguistic representation, such as graphic organizers, shows an increase of 27 percentile points. Also demonstrating increased student achievement is helping students organize their thoughts through summarizing and note-taking (34 percentile point gain) and identifying similarities and differences (45 percentile point gain) (Marzano, Pickering, and Pollock, 2001). | <ul style="list-style-type: none"> <li><input type="checkbox"/> Participants use graphic organizer software to organize thinking.</li> <li><input type="checkbox"/> Many activities, such as an analysis of a narrative, incorporate identification of similarities and differences.</li> <li><input type="checkbox"/> Participants use various examples of note-taking strategies when watching videos.</li> <li><input type="checkbox"/> Instructors model effective questioning strategies throughout.</li> </ul> |
| <b>Constructivism:</b> A theory arguing that learning occurs when students build on existing knowledge and actively construct knowledge in authentic situations.                                                   | Use of hands-on activities in the classroom is associated with higher student achievement (Wenglinsky, 2002). Helping students make connections to previous learning through cues, questions, and advance organizers improves student achievement by 22 percentile points (Marzano, Pickering, and Pollock, 2001).                                                                                                                                                                                                                                    | <ul style="list-style-type: none"> <li><input type="checkbox"/> Participants are actively engaged in all activities.</li> <li><input type="checkbox"/> Graphic organizer software is used during activities to organize thinking.</li> <li><input type="checkbox"/> Activities allow for substantial participant choice.</li> </ul>                                                                                                                                                                                  |
| <b>Differentiation:</b> A responsive classroom environment that actively engages individual student similarities and differences in readiness, personal interests, cultural diversity, and real-world experiences. | Professional development in working with diverse populations is associated with higher student achievement (Wenglinsky, 2002).                                                                                                                                                                                                                                                                                                                                                                                                                        | <ul style="list-style-type: none"> <li><input type="checkbox"/> Instructors use a variety of instructional strategies to actively engage all participants.</li> <li><input type="checkbox"/> Participant readiness is assessed daily and instruction modified based on assessment.</li> <li><input type="checkbox"/> Many activities are open-ended to accommodate different skill levels and needs.</li> </ul>                                                                                                      |

| <b><i>Educational Theory/Practice Incorporated in QTL™</i></b>                                                                                                      | <b><i>Research on Impact on Student Achievement</i></b>                                                                                                                                                                                                                                                                                                                                                | <b><i>Examples of the Theory/Practice in Action</i></b>                                                                                                                                                                                                                      |
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| <b>Diversity:</b> The variety of intellectual, physical, and cultural aspects brought to the classroom by the students.                                             | Professional development in working with diverse populations is associated with higher student achievement ( <i>Wenglinsky, 2002</i> ).                                                                                                                                                                                                                                                                | <input type="checkbox"/> QTL™ instructors use a variety of instructional strategies to create an environment that enables students to feel their ideas, contributions, and work are valued.<br><input type="checkbox"/> Activities allow for substantial participant choice. |
| <b>Ongoing Assessment:</b> A variety of measures used to assess students' learning and guide teachers' instruction.                                                 | "The most powerful single modification that enhances achievement is feedback" ( <i>Hattie, 1992</i> ). Feedback is most useful when it is timely, provides an explanation of students' work, and is specific to a criterion. Effective use of feedback results in a 33 percentile point gain in achievement ( <i>Walberg, 1999</i> ).                                                                  | <input type="checkbox"/> Instructors model different types of assessments throughout the five days.<br><input type="checkbox"/> Participants develop appropriate measures to assess the collaborative project.                                                               |
| <b>Inquiry:</b> An approach that encourages the learner to ask questions, explore, and experiment to uncover relationships.                                         | Having students generate and test hypotheses is associated with a percentile gain of 26 points ( <i>Ross, 1988</i> ).                                                                                                                                                                                                                                                                                  | <input type="checkbox"/> An environmental research activity incorporates inquiry learning.                                                                                                                                                                                   |
| <b>Project-based Instruction:</b> A comprehensive instructional method that uses complex, real-life projects to motivate learning and provide learning experiences. | Studies of the Co-nect program (which uses technology and project-based learning) showed most schools exhibiting increases in student achievement ( <i>NCCSR, 2002</i> ).                                                                                                                                                                                                                              | <input type="checkbox"/> Numerous activities, such as a constructing a classroom website to communicate learning experiences, model project-based instruction.                                                                                                               |
| <b>Technology-Enriched Environment:</b> The seamless integration of technology into a classroom, where technology is used to achieve specific learning outcomes.    | Computer-assisted instruction has a positive impact on student achievement ( <i>Kulik, 1994</i> ). Students in technology-rich environments outscored students in normal environments in all subject areas, although the impact depends on the use of technology ( <i>Sivin-Kachala, 1998</i> ). Higher-order uses of technology are associated with gains in achievement ( <i>Wenglinsky, 1998</i> ). | <input type="checkbox"/> Technology is integrated as a tool throughout the seven days. Participants use age-appropriate software, scanner, digital microscope, document camera, digital camera.                                                                              |
| <b>Classroom Management Strategies:</b> Strategies used to organize and manage the learning environment, student behaviors, and classroom instruction.              | Effective classroom management is the strongest predictor of achievement ( <i>Wang, Haertel, and Walberg, 1993/94</i> ).                                                                                                                                                                                                                                                                               | <input type="checkbox"/> QTL™ instructors model effective classroom management strategies throughout, including Been There/Done That chart, various attention-getting techniques, etc.                                                                                       |
| <b>Thinking Skills:</b> Use of higher order thinking skills such as classifying, predicting, making inferences, problem solving, and drawing conclusions.           | Professional development in and classroom use of higher order thinking skills are both associated with increased student achievement ( <i>Wenglinsky, 2002</i> ). Disadvantaged students participating in the HOTS program (which merges higher order thinking skills and technology) increased twice the national average on reading and math test scores ( <i>Pogrow, 1990</i> ).                    | <input type="checkbox"/> Most activities require the use of higher order thinking skills. For example, the field study incorporates the use of classification, analysis, synthesis, and problem solving.                                                                     |

*The following educational theories and practices do not have strong research showing a direct connection to improved student achievement. They do, however, affect the expectations teachers have for their students; thereby having an indirect effect on student achievement. They are also practices valued by many educators.*

| <b>Educational Theory/Practice Incorporated in QTL™</b>                                                                                                                                                                | <b>Research on Impact on Student Achievement</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <b>Examples of the Theory/Practice in Action</b>                                                                                                                                                                                                                                                                                                                   |
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| <b>Multiple Intelligences:</b> A theory recognizing the variety of distinct intelligences individuals have, including verbal, logical, spatial, kinesthetic, musical, interpersonal, intra-personal, and naturalistic. | Research on this topic is scant and inconclusive. One study of six schools with an MI curriculum and increased student achievement suggests that the results may be attributed to higher expectations for student learning ( <i>Campbell and Campbell, 1999</i> ). Schools implementing the Different Ways of Knowing reform program (based on Multiple Intelligences Theory and learning styles) increased their students' reading achievement by 8 percentile points for every year in the program ( <i>AIR, 1999</i> ).                                                    | <input type="checkbox"/> Participants do an assessment of intelligences.<br><input type="checkbox"/> Instructors model a variety of activities and instructional approaches to address different intelligences.                                                                                                                                                    |
| <b>Learning Styles:</b> The condition or manner (preferences, tendencies, strategies) under which students learn best.                                                                                                 | There is a large body of research with no real consensus on the definition of learning styles. There is some support that matching instructional strategies and learning styles will affect student achievement (i.e., <i>Riding and Grimley, 1999</i> ), but it is not seen as conclusive by the research community. Schools implementing the Different Ways of Knowing reform program (based on Multiple Intelligences Theory and learning styles) increased their students' reading achievement by 8 percentile points for every year in the program ( <i>AIR, 1999</i> ). | <input type="checkbox"/> Identification of learning styles is incorporated into QTL™ to help modify instructional strategies so that the needs of all learners are addressed at some time during the day.<br><input type="checkbox"/> Many activities involve substantial participant choice in presentation and product, accommodating different learning styles. |
| <b>Thematic Instruction:</b> An approach that involves the use of an overall theme to connect knowledge and skills.                                                                                                    | Integrated curriculum promotes increased student engagement, teachers' professional growth, parent involvement and emphasis on relevance and meaning. There are little data showing any direct impact on student achievement ( <i>NASSP, 2002</i> ).                                                                                                                                                                                                                                                                                                                          | <input type="checkbox"/> Five days are organized around a theme.<br><input type="checkbox"/> QTL™ integrates subject areas across curricula.                                                                                                                                                                                                                       |



## How ExplorNet's QTL™ Model and the QTL™ Program Align with *No Child Left Behind*

Federal guidelines for what constitutes “high-quality professional development” are laid out as part of Title IX, section 9101(34) of the 2001 update of the Elementary and Secondary Education Act (ESEA). The following table shows how the QTL™ Model and The Centers for Quality Teaching and Learning™ meets the challenges of this legislation, also known as “*No Child Left Behind*.”

| <b><i>No Child Left Behind</i> Legislation defines quality Professional Development as including the following activities:</b>                                                                              | <b>Research Finds:</b>                                                                                                                                                                                                                                                                                                                                                                                                           | <b>ExplorNet's QTL™ Program</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
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| "...improve and increase teachers' knowledge of the academic subjects the teachers teach, and enable teachers to become highly qualified"                                                                   | <p>Effective professional development "focuses on deepening teachers' content knowledge and pedagogical skills" (<i>NSDC, 2001</i>).</p> <p>Programs that focus on subject matter knowledge in combination with how students learn are more likely to have a larger effect on student achievement outcomes (<i>Kennedy, 1999</i>).</p>                                                                                           | <p>QTL™ immerses teachers in a classroom model that uses effective pedagogical strategies. These strategies are connected to academic content within the context of instructional activities focusing on learning styles, multiple intelligences, cooperative learning, and other learning strategies and theories. Specific content knowledge is not the focus; rather, QTL™ helps teachers align content more effectively through blending educational strategies in an environment enriched through technology.</p>                                                                                                                                                                                                                                                                                   |
| "...Are an integral part of broad school-wide and district-wide educational improvement plans"                                                                                                              | <p>Professional development should be part of a coherent program of learning that is related to the subjects, curriculum and students teachers teach (<i>Cohen &amp; Hill, 1998</i>).</p> <p>It is connected to teachers' goals for professional development, connected to state standards and assessments, and encourages professional communication with other teachers (<i>Garet et al., 2001</i>).</p>                       | <p>The QTL™ model demonstrates how to use appropriate strategies and resources to achieve the state's academic standards for students, including strategies for closing the achievement gap. It also enables teachers to meet required technology competencies. The program aligns with individual teachers' goals for their own professional learning.</p> <p>Day 6 includes planning a collaborative project aligned with their School Improvement Plan. This is a tool to promote job embedded learning and collaborative problem solving.</p> <p>Day 7 is onsite follow-up and assessment. ExplorNet instructors make site visits to provide assistance with assessment of the collaborative projects and student learning.</p> <p>QTL™ is aligned with state and national curriculum standards.</p> |
| "...give teachers, principals, and administrators the knowledge and skills to provide students with the opportunity to meet challenging State academic content standards and student achievement standards" | <p>Professional development should be part of a coherent program of learning that is related to the subjects, curriculum and students teachers teach (<i>Cohen &amp; Hill, 1998</i>).</p> <p>Professional development is connected to teachers' goals for professional development, connected to state standards and assessments, and encourages professional communication with other teachers (<i>Garet et al., 2001</i>).</p> | <p>The curriculum provides participants with research-based practices that maximize learning in a technology-enriched environment.</p> <p>The program seeks to align individual goals and plans through immersion in an environment that focuses attention on pedagogical applications and new designs for learning.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

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| <p>"...improve classroom management skills"</p>                                        | <p>There should be an exploration of theory, modeling, and practice (<i>Joyce &amp; Showers, 1995</i>).</p>                                                                                                                                                                                                                                                                                                 | <p>Teachers actively participate in the instructional activities that integrate new technical skills with educational theories and practices. The QTL™ model also provides practice with many activities/strategies that teachers can use immediately in their own classroom: Not Yet/Been There Done That Chart, trading cards, literature cubes, human graphing, etc.</p> <p>Numerous management strategies are modeled throughout the learning activities in a classroom context.</p>                                                                                                                                                                                                                          |
| <p>"...are high quality, sustained, intensive and classroom focused"</p>               | <p>Effective professional development is both sustained over time and includes a substantial number of hours (<i>Garet et al, 2001</i>).</p> <p>Professional development should provide teachers with activities they can try out in their own classroom (<i>Guskey, 1986</i>).</p>                                                                                                                         | <p>ExplorNet's QTL™ model is a seven day, 50 hour intensive staff development program that takes place over several months. This time provides an extended experience for teachers to interact with technology and instruction. The duration and intensity of this professional development activity is similar to the median duration of university-supported Eisenhower staff development.</p> <p>The QTL™ Model provides practice with many activities/strategies that teachers can use immediately in their own classroom. QTL™ presents a model classroom.</p>                                                                                                                                               |
| <p>"...are not one-day or short-term workshops or conferences"</p>                     | <p>Effective professional development is both sustained over time and includes a substantial number of hours (<i>Garet et al, 2001</i>). Many of the professional development programs with the highest impact provide more than 120 contact hours.</p> <p>Up to 95% of participants transfer a skill to classroom practice if there is follow-up coaching (<i>Joyce and Showers, 1995; Hord, 1994</i>)</p> | <p>ExplorNet's QTL™ Model is a seven day, 50 hour intensive staff development program that takes place over several months.</p> <p>Day 6 includes planning a collaborative project aligned with school improvement and student learning goals and objectives. Participants have full access to Teacher Central, an expansive collection of online resources and avenues for communications.</p> <p>Day 7 is an onsite visit designed to provide assessment and feedback for the goals of the collaborative plan. Special emphasis is given to aligning the plan and assessment with the school improvement plan, highlighting assessment criteria and generating indicators and evidences of accomplishments.</p> |
| <p>"...support the recruiting, hiring, and training of highly qualified teachers,"</p> | <p>Professional development is connected to teachers' goals for professional development, connected to state standards and assessments, and encourages professional communication with other teachers (<i>Garet et al., 2001</i>).</p>                                                                                                                                                                      | <p>ExplorNet's QTL™ model enables teachers to meet required technology competencies. The program seeks to align with individual goals and the generation of individual plans through immersion in an environment that focuses attention on pedagogical applications and new designs for learning.</p> <p>QTL™ addresses the retention of teachers through providing quality opportunities for interaction and growth.</p>                                                                                                                                                                                                                                                                                         |

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| <p>"...advance teacher understanding of effective instructional strategies that are:</p> <p>a. Based on scientifically based research, and</p> <p>b. Strategies for improving student academic achievement of substantially increasing the knowledge and teaching skills of teachers; and are directly related to State academic content standards, student achievement standards and assessments; and the curricula and programs tied to the standards."</p> | <p>a. Programs that focus on subject matter knowledge in combination with how students learn are more likely to have a larger effect on student achievement outcomes (<i>Kennedy, 1999</i>). Teachers must see the connection between technology and the curriculum (<i>Byrom &amp; Bingham, 1998</i>).</p> <p>b. Professional development should be part of a coherent program of learning that is related to the subjects, curriculum and students teachers teach (<i>Cohen &amp; Hill, 1998</i>). It is connected to teachers' goals for professional development, connected to state standards and assessments, and encourages professional communication with other teachers (<i>Garet et al., 2001</i>).</p> | <p>a. Research-based instructional practices are modeled in QTL™. QTL™ explicitly discusses recent educational theories, including constructivism (<i>Cobb, 1994</i>), social constructivism (<i>Vygotsky, 1978</i>), and multiple intelligences (<i>Krechevsky, Hoerr, &amp; Gardner, 1995</i>).</p> <p>b. The QTL™ model demonstrates how to use appropriate strategies and resources to achieve the state's academic standards for students, including strategies for closing the achievement gap. It also enables teachers to meet national technology competencies.</p> <p>The QTL™ curriculum is centered on academic content standards.</p>                                                                      |
| <p>"...are developed with extensive participation of teachers, principals, parents, and administrators"</p>                                                                                                                                                                                                                                                                                                                                                   | <p>Opportunities for in-depth work with experts and other teachers are more effective than one-shot, isolated experiences (<i>Little, 1993</i>).</p> <p>Key is the creation of an ethic of collaboration (<i>Lieberman &amp; Miller, 1999</i>) resulting in the development of professional communities (<i>McLaughlin &amp; Talbert, 1993</i>).</p> <p>Teachers who work in collaboration with other teachers have instructional practices more consistent with current research (<i>Becker and Riel, 2000</i>).</p>                                                                                                                                                                                              | <p>QTL™ was developed as a joint effort between ExplorNet, school-based curriculum and technology specialists, and the North Carolina Department of Public Instruction. The curriculum was based on models in Georgia and Louisiana.</p> <p>ExplorNet's QTL™ model provides teachers with numerous opportunities for collaboration, including working together on teams and undertaking collaborative projects with fellow educators within their school.</p> <p>Participants have full access to Teacher Central, an expansive collection of online resources and avenues for communications.</p>                                                                                                                      |
| <p>"...are designed to give teachers of limited English proficient children, and other teachers and instructional staff, the knowledge and skills to provide instruction and appropriate language and academic support to those children, including the appropriate use of curricula and assessments."</p>                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | <p>The QTL™ model helps to create the dialogue essential for addressing differentiation.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <p>"...to the extent appropriate, provide training for teachers and principals in the use of technology so that technology and technology applications are effectively used in the classroom to improve teaching and learning in the curricula and core academic subjects in which the teachers teach"</p>                                                                                                                                                    | <p>"Hands-on work" connected to the actual practice of teaching and learning produces enhanced knowledge and skills (<i>Garet et al., 2001</i>).</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <p>Teachers actively participate in the instructional activities that integrate new technical skills with educational theories and practices. The new content knowledge in the QTL™ model revolves around the appropriate use of resources as they connect to curriculum standards and instructional practices. The technical skills are integrated within academic content and instructional activities that model effective pedagogical practices.</p> <p>QTL™ models the use of technology to support research-based instructional practices and State curriculum standards. Teachers learn technical skills within the context of activities they can do in their classroom to improve teaching &amp; learning.</p> |



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| "...as a whole, are regularly evaluated for their impact on increased teacher effectiveness and improved student academic achievement, with the findings of the evaluation used to improve the quality of the professional development" |  | QTL™ is evaluated on an ongoing basis. Measures have focused on teacher instructional practices. Findings are used to modify the program.                                                                                                                                                                                     |
| "...provide instruction in teaching students with special needs"                                                                                                                                                                        |  | <p>The teaching and learning strategies taught in the QTL™ model are applicable to the teaching of all students, including those with special needs.</p> <p>Diverse needs of students are addressed through strategies that are developmentally appropriate.</p>                                                              |
| "...provide instruction in the use of data and assessments to inform and instruct classroom practice"                                                                                                                                   |  | The model assumes knowledge of data in making key instructional decisions relating to instructional goals. Activities within the model do not focus on the use of data in decision-making. The focus is on addressing diverse needs, and meeting performance expectations through quality teaching and efficient use of time. |
| "...include instruction in ways that teachers, principals, pupil services personnel and school administrators may work more effectively with parents."                                                                                  |  | While not specifically addressed, new designs for learning promote deeper understanding of student needs and the opportunity to provide effective communications to parents.                                                                                                                                                  |

## How ExplorNet's Quality Teaching & Learning™ Program Meets *National Staff Development Council* Standards

| Staff development that improves the learning of all students...                                                                                                                                                                         | Quality Teaching & Learning (QTL)™...                                                                                                                                                                   |
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| <b>Context</b>                                                                                                                                                                                                                          |                                                                                                                                                                                                         |
| ...organizes adults into learning communities whose goals are aligned with those of the school and district.                                                                                                                            | ...requires participation of a team of 4-6 educators. Each team creates a collaborative project connected to the school improvement plan.                                                               |
| ...requires skillful school and district leaders who guide continuous instructional improvement.                                                                                                                                        | ...requires the support of the principal and superintendent before schools can participate. Principals are strongly encouraged to attend.                                                               |
| ...requires resources to support adult learning and collaboration.                                                                                                                                                                      | ...instructors work with school teams to identify resources to support their efforts.                                                                                                                   |
| <b>Process</b>                                                                                                                                                                                                                          |                                                                                                                                                                                                         |
| ...uses disaggregated student data to determine adult learning priorities, monitor progress, and help sustain continuous improvement.                                                                                                   | ...has teachers create a collaborative project that is based on needs identified by student learning data.                                                                                              |
| ...uses multiple sources of information to guide improvement and demonstrate its impact.                                                                                                                                                | ...is evaluated with quantitative and qualitative information. The ongoing evaluation is both formative and summative.                                                                                  |
| ...prepares educators to apply research to decision making.                                                                                                                                                                             | ...models research-based instructional practices and the theories behind effective instructional practices.                                                                                             |
| ...uses learning strategies appropriate to the intended goal.                                                                                                                                                                           | ...has participants do all activities, which focus on learning in a technology-enriched environment.                                                                                                    |
| ...applies knowledge about human learning and change.                                                                                                                                                                                   | ...mirrors the methods teachers are expected to use with their students. The program is designed according to research on effective professional development.                                           |
| ...provides educators with the knowledge and skills to collaborate.                                                                                                                                                                     | ...prepares teachers to use technology to collaborate. Teachers also practice collaboration in many of the QTL™ activities.                                                                             |
| <b>Content</b>                                                                                                                                                                                                                          |                                                                                                                                                                                                         |
| ...prepares educators to understand and appreciate all students; create safe, orderly, caring and supportive learning environments and hold high expectations for their academic achievement.                                           | ...helps teachers learn to differentiate instruction for students. QTL™ also models instructional practices, such as learning styles and multiple intelligences, that help teachers reach all students. |
| ...deepens educators' content knowledge, provides them with research-based instructional strategies to assist students in meeting rigorous academic standards and prepares them to use various types of classroom assessments properly. | ...is based on the state curriculum. The experience models how to use effective practices incorporating technology to help students understand the content in the state academic standards.             |



The Centers for  
**Quality Teaching & Learning™**

| National Educational Technology Standards (NETS)<br>for Teachers                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | How QTL™ Builds Teacher Capacity<br>to Meet the Standards                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
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| <p><b>V. Productivity and Professional Practice</b><br/> <i>Teachers use technology to enhance their productivity and professional practice. Teachers:</i></p> <ul style="list-style-type: none"> <li>A. use technology resources to engage in ongoing professional development and lifelong learning.</li> <li>B. continually evaluate and reflect on professional practice to make informed decisions regarding the use of technology in support of student learning.</li> <li>C. apply technology to increase productivity.</li> <li>D. use technology to communicate and collaborate with peers, parents, and the larger community in order to nurture student learning.</li> </ul>                                             | <p>QTL™ exposes teachers to technology-based professional resources. Professional readings, journal entries, and seminar discussions provide opportunities to reflect on the most effective ways to use technology to support student learning. To encourage professional collaboration around issues related to technology, teams of 4 to 6 teachers and administrators from a school are required to attend. QTL™ uses technology for ongoing communication with current and previous participants.</p> |
| <p><b>VI. Social, Ethical, Legal, and Human Issues</b><br/> <i>Teachers understand the social, ethical, legal, and human issues surrounding the use of technology in PK-12 schools and apply those principles in practice. Teachers:</i></p> <ul style="list-style-type: none"> <li>A. model and teach legal and ethical practice related to technology use.</li> <li>B. apply technology resources to enable and empower learners with diverse backgrounds, characteristics, and abilities.</li> <li>C. identify and use technology resources that affirm diversity</li> <li>D. promote safe and healthy use of technology resources.</li> <li>E. facilitate equitable access to technology resources for all students.</li> </ul> | <p>During the learning activities, QTL™ instructors model and teach legal and ethical practices related to technology. Through application of research-based educational theories and practices, QTL™ activities model the constructivist teaching practices that enable instructional differentiation to address the needs of diverse learners.</p>                                                                                                                                                      |

# QTL™ and National Board for Professional Teaching Standards

## Early Childhood Generalist

| Standards – Ages 3-8                                                                                                                                                                                                  | How QTL™ can help....                                                                                                                                                                                                                                  |
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| "Understanding Young Children: ...teachers...understand children as individuals and...plan in response to their unique needs and potentials."                                                                         | Participants learn recent educational theories and practices that explain how children learn and how teachers' instruction can support that learning.                                                                                                  |
| "Equity, Fairness, and Diversity: ...teachers model and teach behaviors appropriate in a diverse society..."                                                                                                          | QTL™ includes information on diversity and theories that support the instruction of diverse populations, such as learning styles and multiple intelligences.                                                                                           |
| "Assessment: Employing a variety of methods, (teachers) systematically observe, monitor, and document children's activities...(using) information to improve their work with children..."                             | Participants use student data to identify students' learning needs and create a collaborative project that addresses those needs and incorporates technology.                                                                                          |
| "Promoting Child Development and Learning: ...teachers promote children's...development by organizing and orchestrating the environment in ways that best facilitate the development and learning of young children." | The QTL™ models a classroom setting, sharing both ways of physically arranging the room and ways of managing the flow of instruction in that classroom.                                                                                                |
| "Knowledge of Integrated Curriculum: ...teachers design and implement developmentally appropriate learning experiences that integrate within and among disciplines."                                                  | QTL™ curriculum models a thematic unit that integrates different subject areas and technology.                                                                                                                                                         |
| "Multiple Teaching Strategies for Meaningful Learning: ...teachers use a variety of practices and resources to promote individual development, meaningful learning, and social cooperation."                          | Participants engage in technology-enriched activities that incorporate research on teaching and learning including project-based instruction, multiple intelligences, constructivism, cooperative learning, learning styles, and thematic instruction. |
| "Professional Partnerships: ...teachers work as leaders and collaborators in the professional community to improve programs and practices..."                                                                         | To foster collaboration, QTL™ requires attendance by a team of 3-5 educators from a school. Participants also work as a team to develop and implement a collaborative project in their school.                                                         |
| "Reflective Practice: ...teachers regularly evaluate, analyze, and synthesize to strengthen the quality and effectiveness of their work."                                                                             | Participants engage in daily reflective activities and discussions that permit them to analyze the strategies they are learning during QTL™.                                                                                                           |

## Middle Childhood Generalist

| Standards – Ages 7-12                                                                                                                                                                                                                                          | How QTL™ can help....                                                                                                                                                                                                                                                                                                        |
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| "Knowledge of Students: ...teachers draw on their knowledge....to understand their students' abilities..."                                                                                                                                                     | Participants learn recent educational theories and practices that explain how children learn and how teachers' instruction can support that learning.                                                                                                                                                                        |
| "Knowledge of Content and Curriculum: ...teachers...make sound decisions about what is important for student to learn within and across the subject areas of the middle childhood curriculum."                                                                 | The QTL™ curriculum is based on state curriculum standards and demonstrates ways of integrating that information across subject areas.                                                                                                                                                                                       |
| "Learning Environment: ...teachers establish a caring, inclusive, stimulating, and safe school community where students can take intellectual risks, practice democracy and work collaboratively and independently."                                           | The theories and strategies covered in the QTL™ program help teachers create an environment that values students' role in the educational process. Instructors model ways to have students work together collaboratively and independently.                                                                                  |
| "Respect for Diversity: ...teachers help students learn to respect and appreciate individual and group differences."                                                                                                                                           | QTL™ includes information on diversity and theories that support the instruction of diverse populations, such as learning styles and multiple intelligences.                                                                                                                                                                 |
| "Instructional Resources: ...teachers create, assess, select, and adapt a rich and varied collection of materials, and draw on other resources such as staff, community members, and students to support learning."                                            | Participants use a variety of resources including video, software, web-based resources, realia, books/literature, and art supplies in their learning experience. With other staff members, students, and often community members, participants create a collaborative project.                                               |
| "Meaningful Applications of Knowledge: ...teachers engage students in learning within and across the disciplines..."                                                                                                                                           | The QTL™ curriculum models a thematic unit that integrates different subject areas and technology.                                                                                                                                                                                                                           |
| "Multiple Paths to Knowledge: ...teachers provide students with multiple paths needed to learn the central concepts in each school subject, explore important themes and topics that cut across subject areas, and build overall knowledge and understanding." | Participants engage in technology-enriched activities centered on state curriculum standards that incorporate research on teaching and learning. Theories and strategies covered include project-based instruction, multiple intelligences, constructivism, cooperative learning, learning styles, and thematic instruction. |
| "Assessment: ...teachers...base their instruction on ongoing assessment..."                                                                                                                                                                                    | Participants use student data to identify students' learning needs and create a collaborative project that addresses those needs and incorporates technology.                                                                                                                                                                |
| "Reflection: ...teachers regularly evaluate, analyze, and synthesize to strengthen the quality and effectiveness of their work."                                                                                                                               | Participants engage in daily reflective activities and discussions that permit them to analyze the strategies they are learning during QTL™.                                                                                                                                                                                 |
| "Contributions to the Profession: ...teachers work with colleagues to improve schools and to advance knowledge and practice in their field."                                                                                                                   | To foster collaboration, QTL™ requires attendance by a team of 3-5 educators from a school. Participants also work as a team to develop and implement a collaborative project in their school.                                                                                                                               |

## What's Happening

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### The case for quality teachers as the state's single best tool for long-term economic growth

**By David Boliek**

CEO, ExplorNet & The Centers for Quality Teaching & Learning™

Economic growth is born in the classroom. The quality of every high school's graduates determines the quality of that community's workforce. The quality of the workforce determines the quality of current and future jobs. And the quality of jobs determines the ultimate quality of the community. Everybody says that's common sense. A strong body of research also makes the link between highly effective teachers and high levels of student education achievement and high levels of education achievement to economic vitality.

Teachers, principals and other education leaders who prepare our students clearly form the basis for the entire equation. Research shows teachers are the most important factor affecting student learning. (*Wright, Horn, Sanders, 1997*) Higher levels of student learning link with a higher quality workforce. (*Hanusek and Kimbo, 2000*). The challenge then becomes generating higher levels of student achievement in order to provide a higher quality workforce. Improving teacher quality provides that link. (*President's Task Force on Teacher Education, 1998; Sanders and Rivers, 1996; National Center for Educational Statistics, 1997; Breneman, 2000*)

Consider the economic impact of high school dropouts.

In a lifetime, a high school graduate will earn \$280,000 more than a high school dropout (*MDC, 2001*). The economic cost is staggering and repeats itself every year. North Carolina surrendered almost \$6,100,000,000 in lifetime earning potential when 21,773 students dropped out of high school in 2001. Another \$6-billion potential vanished in 2002 when a similar number dropped out. The loss repeated in 2003. Arkansas gave up \$2-billion with 6,987 dropouts and repeats the loss potential annually. The story is the same in Mississippi, which lost \$1.7-billion with 6,108 dropouts, and Virginia won't see \$3.2-billion because of 11,415 dropouts in 2001 (*National Center for Education Statistics, 2000-2001*). That is why an emphasis on helping every teacher engage more students through effective teaching is critical. Effective teachers actively engage students in their own learning. As a result, students persist in schooling and don't drop out.

Not only do students stay in school, but when they have a most effective teacher, especially in early grades, research shows their achievement gain can go up 53 percentile points in a year, while students of least effective teachers show only a 14-percentile point gain in a year. Over three years, students with the most effective teachers show an 83-percentile point gain, while students with least effective teachers show a 29-percentile point gain. a 54-point difference. (*Wright, Horn, Sanders, 1997; Haycock, 1998*)

One researcher wrote having an effective teacher represents "the differences between a 'remedial' label and placement in the 'accelerated' or even 'gifted' track. And the difference between entry into a selective college and a lifetime at McDonalds." (*Haycock, 1998*).

An additional element to consider: From October 2001-2003, 521,266 North Carolinians filed unemployment claims as a result of being laid off. For workers who provided the information, 64% of the laid off workers had skills broadly associated with high school dropouts (short and moderate term on the job training). (*NCESC, Nov 2003*). This appears to validate findings that show "workers with higher educational attainment (and higher literacy scores) are unemployed less than workers with lower educational achievement." (*NCES, 1997*)

One reason for this may be that higher educational achievement values learning and provides students with the skills that support lifelong learning processes. These processes allow the holders to either maintain their jobs or quickly and creatively adapt or find new jobs in the face of changing economic conditions (*NCES, 1997*). The data also imply that less-educated workers are at greater risk of having difficulty in the labor market now than in the past (*NCES, 1997*).

To address the economic crisis, policy makers must work on multiple levels simultaneously. This includes immediate steps to improve today's economic climate and at the same time prepare for tomorrow's challenges to economic vitality. While policy makers focus, of necessity, on short-term problems, the long-term solutions - based in improved education for all students - await implementation. Improving teacher quality today will not result in improved educational achievement for today's workforce. The focus of improving teacher quality today is the labor force 10, 20, 30 and 40 years in the future, which is critical for the state's ongoing economic

growth and vitality. Current economic development issues must also recognize findings that show occupations that have the greatest recent job growth and highest earnings are those in which employees have the most education. Workers with limited education or limited literacy are generally shut out of the best paying occupations (NCES, 1997). This applies today and will apply even more directly in the future.

As a critical piece of their long-term strategy, policy-makers must make a commitment to the health and success of North Carolina's educational system. The facts tell us that North Carolina's educational system will not be healthy or successful without quality teachers. Ensuring quality teachers is not a short-term, single-shot process. It requires vision and a willingness to dedicate the necessary time and resources.

Clearly, the state's economic future and its ability to withstand future economic volatility will depend on our public school graduates and their abilities to learn, earn and adapt. As Tom Lambeth of the Z. Smith Reynolds Foundation put it so well, "the path to economic development begins at the schoolhouse door."

*ExplorNet's Centers for Quality Teaching and Learning<sup>T</sup> (QTLT) is part of an overall effort of a number of partners to help teachers become highly effective; enable students to achieve; and create life long learning skills in their students. Participants in QTL gain knowledge and skills associated with highly effective teachers. They increase their knowledge and awareness of research-based instructional strategies and their use of technology as a tool to promote learning.*

*ExplorNet is a non-profit organization that focuses in partnerships that enable teachers to improve student achievement through understanding of educational strategies and the use of technology as a supporting tool.*

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