CHAPTER 5

THE RELATIONSHIP BETWEEN TEACHER QUALIFICATIONS AND QUALITY EDUCATIONAL PROGRAMS

5.1 Introduction

The purpose of this chapter is to provide an assessment of teacher certification, subject area teacher qualifications, teaching experience, and teacher turnover levels. The subsequent sections present data on the extent of Florida's compliance with the *No Child Left Behind Act* (NCLB) highly qualified teacher requirements and trend data on the qualifications and characteristics of teachers in juvenile justice education programs.

As discussed in Chapter 2, NCLB includes the new Improving Teacher Quality State Grants program, a combination of the Eisenhower Professional Development and Class Size Reduction programs. The emphasis of this new program is on the utilization of scientifically validated best practices- in this instance, the recruitment, hiring, and training of highly qualified teachers. In turn, local education agencies (LEAs) are responsible for demonstrating annual progress in the increasing qualifications for all teachers of core academic subjects.

This chapter examines the aforementioned variables as they relate to quality assurance (QA) program performance. The information presented is based on 188 reviews conducted during the 2004 QA cycle. The chapter is comprised of three subsequent sections. Section 5.2 briefly reviews the literature and research questions regarding teacher qualifications and characteristics. Section 5.3 provides the methods and results of teacher qualifications and experience in juvenile justice education programs statewide, and Section 5.4 provides a summary discussion of the chapter's findings.

5.2 Teacher Qualifications

Education research consistently supports the conclusion that teachers with professional certification who teach in their areas of certification are the most effective classroom instructors. While the first step in quality education may be the hiring and retention of appropriately qualified teachers, the second step seems to be ensuring that these teachers are teaching within their areas of certification in order to maximize the utility of their specialized knowledge and training. The existing literature is generally supportive of these recommendations.

An important factor to consider when examining the quality of educational staff is the teacher turnover rate. Ingersoll (2002g; 2002b) found that teacher shortages are due more to attrition

than retirement. Overall, the teaching profession has a much higher rate of turnover than other professions throughout the country: 17% compared to the national average of 11% for other professions. Using national teacher survey data, Ingersoll specifically identifies the first five years of teaching as the critical time for teacher turnover. Eleven percent of new teachers leave the profession after their first year of teaching; after two years, an additional 10% leave, and by the fifth year of teaching, 39% of new teachers have left the profession.

In an effort to alleviate the problems of teacher shortages and staffing, many educational policy makers and school district administrators have allowed teachers to teach out of their areas of certification and have developed alternative routes to certification. Although these strategies have relieved some of the teacher demand problems, it remains unclear whether they will help solve long-term teacher retention problems and how they will affect student academic gains and outcomes.

"Why is working with children considered less complex and to require less expertise than working with accounts or buildings?" (Ingersoll, 2001a, p. 2). The question that Ingersoll asks is in response to an assumption articulated by several policymakers; namely, that specialization is less necessary in education than in other fields. According to national teacher survey data analyzed by Ingersoll, one-third of secondary math teachers and one-fourth of English teachers do not have a major or minor in the subject they are teaching (Ingersoll, 2001a; 2001b). This problem is even greater in juvenile justice and alternative schools.

Not only is out-of-field teaching prevalent in juvenile justice and alternative schools, but it has also been shown to affect student gains. As cited by Darling-Hammond (2002), a study conducted by Monk (1994) found that a lack of college course work in the subject area being taught had a negative effect on student test scores. The study examined the number of college courses completed by teachers in the subject area being taught and examined the standardized test scores of their students, using gains between tests as the measure of student performance. The study found that the fewer college classes the teacher had completed in the subject area being taught, the lower the students' test gains in that subject. While some studies have found a strong positive association between teacher certification, preparation and experience, and students' achievement (Darling-Hammond, 2000; Fetler, 2001), full certification and in-field teaching have been cited as the strongest predictors of student achievement (Darling-Hammond, 2000). It also has been demonstrated that non-certified new teachers have a negative effect on students' achievement (Darling-Hammond, 2000). A similar effect has been found in relation to student dropout rates: increased teacher experience/preparation and dropouts are negatively related, whereas a positive association exists between inexperienced/non-certified teachers and student dropout rates (Darling-Hammond, 2000).

Previous literature reviews are far from consistent. For example, in response to Ingersoll's position, Friedman (2000) cited several studies documenting that teacher certification is not consistently and strongly related to student achievement. According to Goldhaber and Brewer (1997): "[T]he percentage of teachers with at least a BA degree is statistically insignificant in all four subject areas. According to available evidence, one cannot be

confident that hiring more educated teachers…will improve student performance" (citing Hanushek, 1986). "[W]e are far from being able to specify the qualities of effective teaching, in mathematics or science or in general" (citing Shavelson, McDonnel, & Oakes, 1989). It has been contended, however, that these insignificant and inconsistent findings are a result of specification error (e.g., aggregating to school level, omitting teacher personality characteristics, etc.) (Goldhaber & Brewer, 1996). Once more "refined" measures were applied, in-area teaching was found to have a strong positive effect on students' mathematics and science test scores (Goldhaber & Brewer, 1996). This argument was supported by a later study of eighth graders' math assessments (Wenglinsky, 2002). Controlling for socioeconomic status and class size, Wenglinsky found that the teacher's major is strongly associated with students' achievement, as are several areas of professional development (e.g., in higher-order thinking skills and diversity) and teaching methods (e.g., hands-on learning and higher-order thinking skills).

The problem of out-of-field teaching comes down to the argument over subject knowledge versus pedagogy; however, Ingersoll (2001a; 2001b) clarifies that the two are interrelated: pedagogy is often content specific. Teachers trained in traditional, four-year college educational programs receive pedagogical training only in the subject they plan to teach, and this content-specific knowledge may not carry over to the effective teaching of other subjects. Furthermore, teaching methods often accumulate over time as teachers experiment with different strategies while they gain experience in their early years of teaching.

Although subject area certification is identified in the literature as a critical factor for providing quality educational services, current Florida laws allow juvenile justice educators to teach subjects outside their certification areas. Therefore, it is imperative to examine the general teacher qualifications of Florida's juvenile justice teachers, as it is clear that the use of well-prepared and certified educators is the most important best practice in juvenile justice education. Since its inception, JJEEP has included QA standards that address teacher qualifications. These standards have evolved to become as objective and accurate as possible and to reflect educational best practices as identified in the literature. The following section explains the methods and data used to determine statewide teacher quality in juvenile justice education programs and provides results

5.3 Methods and Results

One way to assess the quality of Florida's teachers in juvenile justice facilities is to compare the certification credentials of the instructional staff employed by the various provider types. The following results are based on 188 detention, day treatment, and residential facilities with available teacher certification data. In 2004, there were 1,110 educational staff members, including lead educational administrators and support staff, working in these 188 programs. Among them were 192 exceptional student education (ESE) and guidance support staff who did not have teaching assignments. The remaining 918 were teachers whose primary duties were teaching academic, elective, vocational, and technology classes. Eighty-five teachers, identified as responsible for vocational and technology instruction and who did not teach non-vocational classes, were removed from the teacher certification analysis in order to avoid biasing the results. Arguably, professional teacher certification is not as

critical an issue in vocational courses as it is in academic courses. To avoid a different kind of bias, lead educational administrators and support staff who did not teach in a classroom were also removed from the analysis. Thus, 833 teachers were included in the following analyses. Among them, 47% (392) were male teachers, and 53% (441) were female teachers.

In addition, the following tables report the number and percent of teachers in relation to various qualifications and characteristics. When comparing teacher qualifications and characteristics to QA scores, the statistical method used is Pearson's correlation coefficient (r). This statistical method quantifies the extent to which two variables co-vary together. The significance of the relationship (p-value<.05) confirms that the relationship between the two variables is not due to chance and it is statistically meaningful in a larger population.

Table 5.3-1 shows the types of certifications held by teachers and the percentage of teachers holding each type from 2001 to 2004.

Table 5.3-1: Level of Certification 2001-2004

	Professional Certification	***Temporary Certificate***	***Statement of Eligibility***	***School District Approved***	***Non-Certified***	***Total***
	% n	% n	% n	% n	% n	% n
2001	55% (390)	16% (111)	16% (111)	5% (34)	9% (61)	101% (707)
2002	59% (462)	22% (168)	9% (72)	3% (25)	7% (51)	100% (778)
2003	60% (468)	20% (153)	7% (53)	6% (46)	7% (56)	100% (776)
2004	65% (541)	20% (167)	10% (80)	2% (17)	3% (28)	100% (833)

Note. Row percentages may not add to 100% due to rounding. .

The number of teachers with professional certification increased significantly between 2001 and 2004. At the same time, there has been a striking drop in the number of school district approved teachers. Although the percentage of noncertified teachers remained relatively constant in 2001-2003, the number decreased remarkably in 2004. The implementation of NCLB likely contributed to these positive changes.

As illustrated by Table 5.3-2, school district providers had significantly more professionally certified teachers than private education providers in 2004. Meanwhile, private facilities have a strikingly larger percentage of noncertified teachers than do school district operated facilities.

Table 5.3-2: Certification Status of Teachers by Educational Provider Type in 2004

Type of Certification	*School District Operated (78 programs)*		*Private Not-For-Profit (71 programs)*		*Private For-Profit (13 programs)*		*Total in State (162 programs)*	
	%	n	%	n	%	n	%	n
Professional Certification	83%	(255)	40%	(134)	44%	(19)	60%	(408)
Temporary Certificate	13%	(39)	32%	(105)	33%	(14)	23%	(158)
Statement of Eligibility	2%	(5)	21%	(68)	14%	(6)	12%	(79)
School District Approved	3%	(8)	2%	(6)	2%	(1)	2%	(15)
Non-Certified	1%	(2)	7%	(23)	7%	(3)	4%	(28)
Total	102%	(309)	102%	(336)	100%	(43)	101%	(688)

Note. This table's analysis excludes the one program operated by the Florida Department of Agriculture and detention centers. The numbers of teachers are in parentheses. Column percentages may not add to 100% due to rounding.

When comparing school district providers with private not-for-profit education providers, school district operated facilities employed significantly more teachers having professional certification and fewer teachers having temporary certificates and statements of eligibility, or who were non-certified. School district providers employed a significantly larger percentage of teachers having professional certification (82.5%), compared to private not-for-profit (39.9%) and private for-profit providers (44.2%). School district providers employed fewer teachers with temporary certificates and statements of eligibility, and there were only two teachers employed, without certification, by school district providers.

In general, the results indicate that the instructional staff hired by private educational providers are less qualified in terms of professional certification than those hired by school districts. While certification does not automatically equate with quality, the relationship is sufficiently strong to raise concerns. It can be assumed that there were substantial differences between the quality of teachers employed by school district and private providers of juvenile justice education, and it remains to be seen what the educational impact will be on youths exposed to these different teachers.

As previously stated, qualified instructional personnel are essential to delivering quality education to juvenile justice youths. JJEEP maintains a comprehensive database on teacher certification that tracks the number of teachers, levels and types of certifications, and subjects taught. JJEEP also tracks administrative and support staff, including ESE and guidance support personnel. One area explored by JJEEP is the specific relationship between quality education, as measured by JJEEP's QA indicators, and the overall proportion of teachers who have professional certification.

Table 5.3-3 shows the correlation between the percentage of teachers with professional certification and QA scores for each of the QA indicators and standards and the overall mean QA score. Those programs that had a greater proportion of teachers with professional certification had a higher overall mean QA score for 2004. This relationship was statistically

significant at the 0.05 level. Among the correlations between the percentage of teachers with professional certification and nine indicators, five of them were significant at 0.001.

Table 5.3-3: Relationship Between Scores on QA Indicators and Proportion of Teachers with Professional Certification

Indicator	*Coefficient*	*Standard*	*Coefficient*
Indicator 1: Transition Services	-0.018	**Standard 1: Transition**	0.041
Indicator 2: Testing and Assessment	0.267***		
Indicator 3: Student Planning	0.259***	**Standard 2: Service Delivery**	0.155*
Indicator 4: Academic Curriculum and Instruction	0.275***		
Indicator 5: Employability, Career, and Technical Curriculum	0.268***	**Standard 3: Educational Resources**	0.225**
Indicator 6: ESE and Related Services	0.199**		
Indicator 7: Educational Personnel Qualifications and Professional Development	0.548***	**Standard 4: Contract Management**	0.180**
Indicator 8: Learning Environment and Resources	-0.008		
Indicator 9: School District Monitoring, Accountability, and Evaluation	0.180**	**Mean Overall QA Score 2004**	0.144*

*p<.05.
**p<.01.
***p<.001.
All correlations are computed as Pearson-r correlation coefficients. Tests of statistical significance are one-sided.

A strong relationship between the use of teachers with professional certification and standard three, educational resources, was expected, in part because the instructional personnel qualifications indicator in standard three rates programs according to the qualifications of their educational personnel. Thus, when programs have no or few professionally certified teachers, they receive lower QA ratings. As indicated by the strong relationship in indicator 7, educational personnel qualifications and professional development, professionally certified teachers also participated in continuing education and in-service training more than teachers with temporary certificates and non-certified teachers. Further, the proportion of teachers with professional certification affected the programs' QA ratings with regard to educational resources.

The relationship between the prevalence of teachers with professional certification and standard two, service delivery, was statistically significant at the 0.05 level. Not surprisingly, indicator 4, academic curriculum and instruction, and indicator 5, employability, career, and technical curriculum, are among the strongest correlates of the proportion of certified teachers.

Even though the relationship between standard one and the prevalence of teachers with professional certification was not significant, it was significantly related to indicator 2, testing and assessment and indicator 3, student planning, which suggests that educational programs having a higher percentage of teachers with professional certification serve the individual needs of students better and deliver transition services more successfully than programs with lower percentages of teachers with professional certification.

Table 5.3-4 shows the correlation between the percentage of certified (professional and temporary) teachers and QA scores for each of the QA indicators, standards, and the overall mean QA score. Not surprisingly, those programs having a greater proportion of teachers with professional or temporary certification had a higher overall mean QA score for 2004. This relationship was statistically significant at the 0.01 level.

Table 5.3-4: Relationship Between Scores on QA Indicators and Proportion of Teachers with Professional Certification or Temporary Certification

Indicator	*Coefficient*	*Standard*	*Coefficient*
Indicator 1: Transition Services	0.011	**Standard 1: Transition**	0.139*
Indicator 2: Testing and Assessment	0.207**		
Indicator 3: Student Planning	0.197**	**Standard 2: Service Delivery**	0.181**
Indicator 4: Academic Curriculum and Instruction	0.207**		
Indicator 5: Employability, Career, and Technical Curriculum	0.200**	**Standard 3: Educational Resources**	0.165*
Indicator 6: ESE and Related Services	0.166*		
Indicator 7: Educational Personnel Qualifications and Professional Development	0.417***	**Standard 4: Contract Management**	0.170**
Indicator 8: Learning Environment and Resources	0.005		
Indicator 9: School District Monitoring, Accountability, and Evaluation	0.170**	**Mean Overall QA Score 2004**	0.176**

*p<.05. **p<.01. ***p<.001. All correlations are computed as Pearson-r correlation coefficients. Tests of statistical significance are one-sided.

The results presented in Table 5.3-4 are very similar to those in Table 5.3-3. The results show that the use of teachers with professional and temporary certification affected programs' overall QA scores, and thus, the quality of education delivered to juvenile justice students incarcerated in the programs. To provide historical perspective, 60 programs had all professionally and temporarily certified teachers in 2002, and 14 programs had no teachers with professional or temporary certification during 2002. During 2003, while 93 programs

had all professionally and temporarily certified teachers, 11 programs had no teachers with professional or temporary certification. The implementation of NCLB led to the remarkably positive change in hiring teachers with professional or temporary certification in 2004. More specifically, during 2004, while 121 programs had all professionally and temporarily certified teachers, three programs had no teachers with professional or temporary certification, which negatively affected the programs' QA scores.

Within juvenile justice schools, teachers often perform a variety of duties, both within and outside of their areas of certification. The literature demonstrates that students usually perform better when their instructors are certified in the subjects they teach.
As discussed previously, out-of-field teaching is most prevalent in alternative or juvenile justice schools that serve neglected, delinquent, and academically at-risk students. To illustrate the frequency of this problem, Table 5.3-5 highlights the percentage of teachers teaching in-field for core academic subjects in Florida's juvenile justice schools.

Table 5.3-5 displays the number of academic courses taught in 2004 by subject area certified teachers who held certification in math, English, social studies, and science, and the number of academic courses taught by out-of-field teachers who subsequently taught within those areas but did not hold certification in those content areas.

Table 5.3-5: Number of Academic Courses Taught by Subject Area Certified Teachers and Out-of-Field Teachers 2004

Certification/Teaching	*Math*		*English*		*Social Studies*		*Science*	
	%	n	%	n	%	n	%	N
Courses taught by Subject Area Certified Teachers	*21%*	(66)	*31%*	*(118)*	*37%*	*(108)*	*23%*	*(65)*
Courses taught by Out-of-Field Teachers	*79%*	(252)	*69%*	*(265)*	*63%*	*(186)*	*77%*	*(218)*
Total	100%	(318)	100%	(383)	100%	(294)	100%	(283)

According to the data presented in Table 5.3-5, the majority of teachers teaching core academic courses do not hold certifications in these content areas. While social studies courses have more teachers (37%) teaching in their subject area (as compared to other content areas), math courses are most often taught by out-of-field teachers (21%).

Table 5.3-6 presents the relationships between the proportion of in-field teaching and QA indicators and overall QA score. The proportion of in-field teaching is significantly related to the overall QA score at 0.05.

Table 5.3-6: Relationship Between Scores on QA Indicators and Proportion of In-Field Teaching (188 Programs)

Indicator	*Coefficient*	*Standard*	*Coefficient*
Indicator 1: Transition Services	0.124*	**Standard 1: Transition**	0.143*
Indicator 2: Testing and Assessment	0.141*		
Indicator 3: Student Planning	0.142*	**Standard 2: Service Delivery**	0.174**
Indicator 4: Academic Curriculum and Instruction	0.149*		
Indicator 5: Employability, Career, and Technical Curriculum	0.150*	**Standard 3: Educational Resources**	0.144*
Indicator 6: ESE and Related Services	0.111		
Indicator 7: Educational Personnel Qualifications and Professional Development	0.164*	**Standard 4: Contract Management**	0.062
Indicator 8: Learning Environment and Resources	0.073		
Indicator 9: School District Monitoring, Accountability, and Evaluation	0.062	**Mean Overall QA Score 2004**	0.169*

*p<.05.
**p<.01.
***p<.001.
All correlations are computed using Pearson with one-sided test.

As expected, standards one, two, and three were significantly related to the proportion of in-field teaching, among which standard two had the strongest association, indicating that service delivery is affected by subject area certified teaching more so than all of the other areas. This finding suggests that in-field teaching could help programs accomplish the goal of providing students with educational opportunities that will best prepare them for their successful reentry into community, school, and/or work settings.

Table 5.3-7: Number of Academic Courses Taught by Subject Area Certified Teachers and Out-of-Field Teachers—2001-2004 (in percentages)

Teaching/Year	*2001*	*2002*	*2003*	*2004*
MATH				
Courses taught by Subject Area Certified Teachers	11 (34)	12 (41)	14 (44)	21 (66)
Courses taught by Out-of-Field Teachers	89 (274)	88 (299)	86 (261)	79 (252)
Total	**100% (308)**	**100% (340)**	**100% (305)**	**100% (318)**
ENGLISH				
Courses taught by Subject Area Certified Teachers	19 (65)	21 (85)	22 (74)	31 (118)
Courses taught by Out-of-Field Teachers	81 (282)	79 (319)	78 (268)	69 (265)
Total	**100% (347)**	**100% (404)**	**100% (342)**	**100% (383)**
SOCIAL STUDIES				
Courses taught by Subject Area Certified Teachers	28 (81)	20 (71)	32 (88)	37 (108)
Courses taught by Out-of-Field Teachers	72 (207)	80 (283)	68 (185)	63 (186)
Total	**100% (288)**	**100% (354)**	**100% (273)**	**100% (294)**
SCIENCE				
Courses taught by Subject Area Certified Teachers	14 (36)	15 (40)	17 (43)	23 (65)
Courses taught by Out-of-Field Teachers	86 (227)	85 (224)	83 (208)	77 (218)
Total	**100% (263)**	**100% (264)**	**100% (251)**	**100% (283)**

Note. The numbers of teachers are in parentheses.

Except for social studies, the percentage of courses taught by subject area certified teachers has steadily increased over all four years, and the most striking increase in the percentage of courses taught by subject area certified teachers in all four subjects occurred in 2004. This is consistent with our earlier finding that the implementation of NCLB apparently contributed to this considerable increase.

Other topics addressed in the area of teacher certification reflect data collected during the 2004 review cycle. These include levels of experience and teacher turnover. These issues will be discussed in the following subsection.

Teacher Experience and Stability

In addition to professional teacher certifications, experience must also be considered when measuring the quality of teachers. In this analysis, teaching experience is measured by years of teaching. Table 5.3-8 summarizes the teaching experience of the 819 teachers in juvenile justice facilities in 2004. Fourteen teachers were excluded from the analysis because information on Number of Years of Teaching with Professional Certification was not available.

Table 5.3-8: Number of Years of Professional Teaching Experience, 2004

Number of Years of Teaching	*Number of Teachers*	*Percentage*	*Cumulative Percentage*
Less than 1 year	92	11%	11%
1-5 years	267	33%	44%
6-10 years	160	20%	63%
11-20 years	142	17%	81%
More than 20 years	158	19%	100%
Total	819	100%	100%

Note. This table's analysis excludes those teachers who have no data entered on Number of Years of Teaching with Professional Certification. Column percentages may not add to 100% due to rounding.

While 92 teachers have less than one year of teaching experience, accounting for 11.2% of the total, the preponderance of teachers (32.6%) have taught between one and five years. Over half of the teachers (56.2%) in juvenile justice facilities have been teaching for more than five years, some (19.3%) for more than 20 years. These data support Ingersoll's findings, as discussed earlier in this chapter.

Table 5.3-9 documents the relationship between average years of teaching in a specific program and QA indicators as well as overall QA score. Average years of teaching was computed for each program by dividing the total years all the teachers have taught by the number of teachers the program contains. Average years of teaching did affect the overall QA score significantly and positively. The strongest relationships among QA indicators were indicator 2, testing and assessment; indicator 3, student planning; indicator 4, academic curriculum and instruction; indicator 5, employability, career, and technical curriculum; and indicator 7, educational personnel qualifications and professional development. This finding is not surprising given that these indicators directly measure educational quality and service delivery.

Table 5.3-9: Relationship Between Scores on QA Indicators and Average Years of Teaching

Indicator	*Coefficient*	*Standard*	*Coefficient*
Indicator 1: Transition Services	-0.027	**Standard 1: Transition**	0.074
Indicator 2: Testing and Assessment	0.400***		
Indicator 3: Student Planning	0.395***	**Standard 2: Service Delivery**	0.148*
Indicator 4: Academic Curriculum and Instruction	0.406***		
Indicator 5: Employability, Career, and Technical Curriculum	0.401***	**Standard 3: Educational Resources**	0.214**
Indicator 6: ESE and Related Services	0.142*		
Indicator 7: Educational Personnel Qualifications and Professional Development	0.493***	**Standard 4: Contract Management**	0.102
Indicator 8: Learning Environment and Resources	0.005		
Indicator 9: School District Monitoring, Accountability, and Evaluation	0.102	**Mean Overall QA Score 2004**	0.153*

*p<.05. **p<.01. ***p<.001. All correlations are computed using Pearson with one-sided test.

Based on information gathered from the same population, Table 5.3-10 shows the number of months of teaching in the same juvenile justice educational program based on 824 teachers. Nine teachers were excluded from this analysis because information on Number of Months of Teaching in a Specific Program was not available.

Table 5.3-10: Number of Months of Teaching in the Same Juvenile Justice Educational Program in 2004

Number of Months of Teaching in a Specific Program	*Number of Teachers*	*Percentage*	*Cumulative Percentage*
1 month or less	50	6%	6%
2-6 months	135	16%	23%
6-12 months	158	19%	42%
13 months-24 months (2 years)	150	18%	60%
25 months-36 months (3 years)	82	10%	70%
37 months-60 months (5 years)	144	18%	87%
More than 60 months	105	13%	100%
Total	824	100%	100%

Note. N = 824 due to missing data on nine teachers.

As noted in Table 5.3-10, 6.1% of teachers have taught in a specific juvenile justice program for less than one year. Furthermore, 87.3% have taught in a juvenile justice program for less than five years. These findings indicate a particularly high teacher turnover rate in juvenile justice institutions as compared to that of school district operated schools. As discussed earlier, Ingersoll determined the public school teacher turnover rate at 39% of new teachers leaving the profession by their fifth year of teaching (2002a; 2002b).

Table 5.3-11 summarizes the correlations between average months of teaching in the same juvenile justice educational program and QA indicators and overall QA score. The relationship between average years of teaching and overall QA score was strikingly strong and significant at the 0.001 level.

Table 5.3-11: Relationship Between Scores on QA Indicators and Average Months of Teaching in the Same Juvenile Justice Educational Program

Indicator	*Coefficient*	*Standard*	*Coefficient*
Indicator 1: Transition Services	0.119	**Standard 1: Transition**	0.153*
Indicator 2: Testing and Assessment	0.363***		
Indicator 3: Student Planning	0.355***	**Standard 2: Service Delivery**	0.227**
Indicator 4: Academic Curriculum and Instruction	0.367***		
Indicator 5: Employability, Career, and Technical Curriculum	0.371***	**Standard 3: Educational Resources**	0.297***
Indicator 6: ESE and Related Services	0.159*		
Indicator 7: Educational Personnel Qualifications and Professional Development	0.416***	**Standard 4: Contract Management**	0.174**
Indicator 8: Learning Environment and Resources	0.139*		
Indicator 9: School District Monitoring, Accountability, and Evaluation	0.174**	**Mean Overall QA Score 2004**	0.249***

*p<.05.
**p<.01.
***p<.001.
All correlations are computed using Pearson with one-sided test.

Average Years of Teaching was significantly related to each standard, with standard three having the strongest relationship. Likewise, indicator 2, testing and assessment; indicator 3 student planning; indicator 4, academic curriculum and instruction; indicator 5, employability, career, and technical curriculum; and indicator 7, educational personnel qualifications and professional development, had the strongest relationships with average years of teaching among all nine indicators. This confirms the earlier finding that teacher turnover matters greatly in the provision of quality education as measured by QA.

While years of teaching experience and teacher turnover are considered important factors in providing quality education, as discussed earlier, educational provider type is also a factor influencing quality education. Table 5.3-12 compares years of teaching experience and teacher turnover between school district and private-operated educational programs.

Table 5.3-12: Average (Mean) Years of Teaching and Average (Mean) Months of Teaching in a Program by Educational Provider Type, 2004

	School District Operated	*Private Not-For-Profit*	*Private For-Profit*	*Total*
Average (Mean) Years of Teaching	12.7	5.5	6.9	8.8
Average Months of Teaching in a Program	37.0	20.4	18.1	27.7

Note. This table's analysis excludes detention centers.

Not surprisingly, in school district operated programs, average years of teaching and average months of teaching in a program were strikingly greater than private not-for-profit and private for-profit programs. This finding, together with level of teacher certification among types of programs, helps explain the higher QA performance for school district operated programs as opposed to private not-for-profit and private for-profit programs.

In sum, issues relating to teacher certification, retention, and out-of-field teaching are not solely confined to juvenile justice educational programs. DOE has projected the number of teachers needed throughout the state through 2021. According to the DOE's Office of Policy Research and Improvement (DOE, 2002), over the next 19 years, Florida will need 16,000 to 19,000 teachers per year—173,000 over the next 10 years. The report examines projected enrollment trends, retirement trends, and teacher migration within Florida. Although 16-20% of these teaching positions will be filled by the migration of teachers from one school or district to another, the report does not consider the difficulties of staffing juvenile justice or alternative schools. In light of the growing need for qualified teachers throughout the state and the nation, juvenile justice schools face particular challenges in hiring and maintaining highly qualified teachers.

5.4 Summary Discussion

Several key findings emerge when examining the correlates of teacher qualifications and quality education programs. The proportion of teachers with professional certification continues to be significantly related to the quality of educational services within Florida's juvenile justice education programs. In addition, average years of teaching, average months of teaching in a specific program, and the proportion of subject area certified teachers is significantly correlated with the quality of educational services.

Policy decisions that affect the quality of education provided in these institutions are fundamental to JJEEP's mission. Not only is quality education important in and of itself, but there is also a well-established link between education and delinquency.

The certification status of teachers is very important in determining the quality of educational services. The majority of teachers hired by school district providers have professional certification: 82.5% in comparison to 39.9% hired by private not-for-profit providers and 44.2% hired by private for-profit providers. This finding helps explain some of the significant differences in QA scores when comparing across education provider types. It is important to emphasize that the quality of teachers, as measured by level of certification and teaching in-field, has the strongest relationship with overall QA scores, regardless of provider type or facility size. The specific relationship between the proportion of teachers with professional certification and quality education cannot be ignored. Specifically, the greater the numbers of teachers with professional certification, the higher the program's mean overall QA score. Because of this consistent finding over the years, in 2005, JJEEP will recommended that DOE and the legislature consider ways to require increased numbers of professionally certified teachers in juvenile justice educational programs.