

ARTC

Alternative Routes to Certification

REPORT TO THE

DELAWARE DEPARTMENT OF EDUCATION

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Executive Summary

During the first four years, participation in ARTC has been very broad across the state. Candidates have been enrolled by

- over 80% of regular and one-third of vocational school districts, and 3 charter schools.
- 70% of secondary schools, including 90% of high schools and over half of middle schools.

The program is becoming increasingly helpful to districts in identifying candidates for hard-to-fill positions. About half of the candidates in the last two cohorts were recruited and advised through ARTC.

Since ARTC began in August 1997, 120 candidates have been enrolled: 59 (49%) have completed their ARTC courses, 39 (33%) are currently enrolled, and 22 (18%) withdrew, resigned and/or were not renewed by their districts. Seventeen additional candidates have already been enrolled in the 2001 – 2002 cohort.

Candidates have been evenly balanced by gender and 27% minority. Most are in their 30's ; working at the high school level; teaching science, business, foreign languages, technology education and mathematics; and coming directly from other careers in business and industry. Twenty-eight percent had one or more advanced degree, and most earned an overall college GPA of 3.0 or higher. Almost half had taken one or more education course before entering ARTC.

A survey of supervisors of graduates of the first three cohorts, indicates that ARTC teachers are

- staying in Delaware schools (93% in public or charter schools; 3% in private schools);
- obtaining certification (71%) and tenure (24%);
- performing as well as or better than other beginning teachers (94%); and
- rated “strong” across a variety of specific domains of teaching performance.

Attrition (25%) for these cohorts is comparable to national statistics for first-year teachers (20%), and has declined from 38% in 1997 cohort to 23% in 1998 to 15% in 1999.

Preliminary analysis suggests that those who have worked with kids in or out of schools and shown prior interest in teaching may be somewhat more likely to succeed than those whose prior experience is primarily with adults and outside the school context.

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Overview of This Report

PART I profiles the first four ARTC cohorts (1997 – 1998 through 2000 – 2001), including patterns of district and school participation, and characteristics of all 120 candidates enrolled by districts during the first four years.

PART II considers patterns of attrition among the first three cohorts, including an analysis of factors that may be associated with successful completion of the program.

PART III summarizes key findings of a survey of supervisors of the first three cohorts of ARTC graduates (members of 1997 – 1998 through 1999 – 2000 cohorts), including retention, certification and tenure, and evaluations of classroom performance.

PART IV presents current enrollment projections for the 2001 – 2002 cohort.

Tables and charts are included throughout the body of the report. More detailed data can be found in the Appendices.

Profile of the First Four ARTC Cohorts 1997 – 1998 to 2000 – 2001

Program Participation (Appendix A)

Since August of 1997, ARTC participation has been very broad across the state:

- over 80% of regular public school districts (13 of 16)
- one-third of vocational school districts (1 of 3)
- 3 charter schools
- over 70% of Delaware secondary schools (42 of 59)
- 90% of regular and vo-tech high schools (26 of 29)
- over half of middle schools (16 of 30)
- three district programs (D.A.P.I. in Brandywine, the Positive Learning Center in Red Clay; Ferris School for Boys in New Castle County Vo-Tech)

More than half of candidates (63%) were enrolled by New Castle County districts, with the remaining 37% teaching in Kent and Sussex Counties.

Candidate Profile (Appendix B)

Districts enrolled 120 candidates in the first four ARTC cohorts.

Status in the Program. About half of these candidates (49%) have completed their ARTC course work and one-third (33%) are currently enrolled or still working to complete their ARTC courses. Twenty-two candidates (18%) did not complete the program for a variety of reasons (see Attrition below).

Recruitment of Candidates Through ARTC. The program continues to help districts identify candidates for hard-to-fill positions. About half of those enrolled in the last two cohorts (1999

-2000 and 2000 – 2001) were recruited through the ARTC office. These candidates learn about the ARTC program via the web site, word-of-mouth, or referral from schools, districts, university counseling centers, or program participants. They are counseled through the process of applying for certification, establishing eligibility, completing Praxis I requirements, and applying for teaching positions. The ARTC office also maintains a list of possible candidates in critical needs areas, which is shared with districts via e-mail and in response to specific district requests.

Personal Characteristics. Candidates have been evenly balanced by gender (48% women and 53% men). Twenty-seven percent are minority candidates (19% African-American; 6% Hispanic; 2% Asian) (Figure 1), about twice the proportion of minority teachers state-wide (13%). Most are in their 30's (Figure 2).

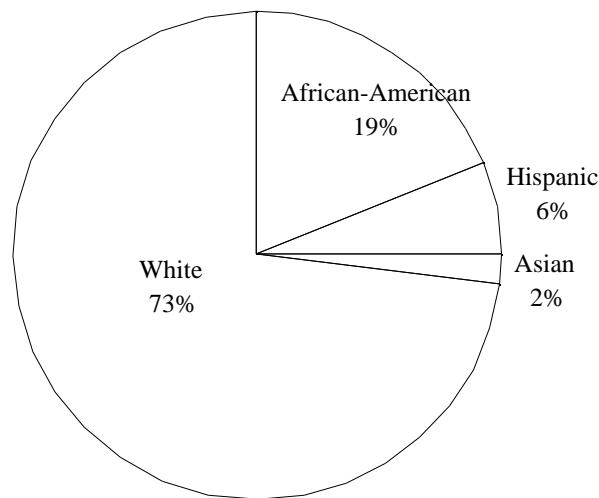


Figure 1. Proportion of Minority Candidates 1997 - 2000 (N = 120)

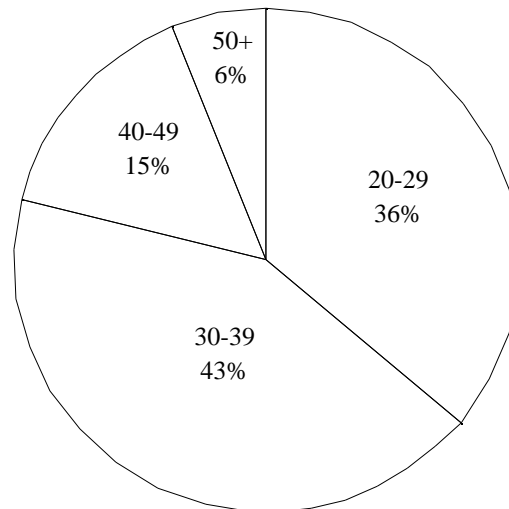


Figure 2. Age of Candidates 1997 - 2000 (N = 120)

College Degrees and GPA's. Twenty-eight percent of those enrolled in the first four ARTC cohorts had one or more advanced degrees. About one-quarter had one or more master's degrees and 5% an earned doctorate in their subject areas. Most (58%) had earned an overall GPA of 3.0 or higher.

Teaching Assignments. Most (over 82%) were employed at the high school level. Three-quarters (76%) were hired to teach science, business, foreign languages, technology education, and mathematics (Figure 3).

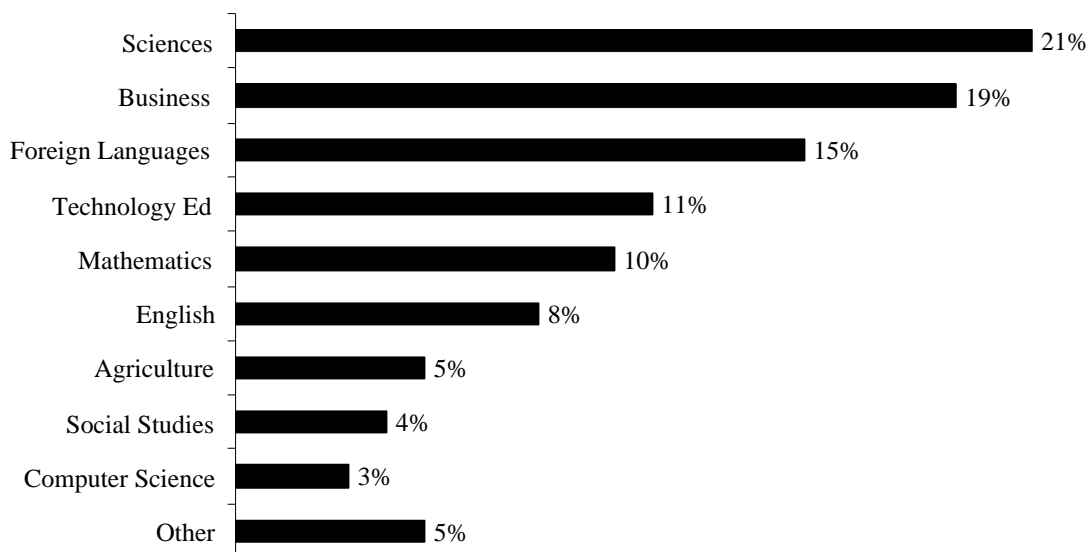


Figure 3. Candidate Subject Areas 1997 - 2000 (N = 120)

Employment Prior to Taking the ARTC Teaching Position. As expected, most ARTC teachers come into teaching from other careers and professions (Figure 4). More than half (57%) were employed outside education – in business (35%), industry (17%) or government service (5%) – in the year prior to taking their ARTC position. One in 5 had been employed in education (teaching full- or part-time, working as aides or paraprofessionals, or substitute teaching) for at least some portion of the year before enrolling in ARTC. This group is extremely varied, ranging from those who had been teaching in private schools for as long as 17 years to those who substituted for a few months before being offered their ARTC position. Only a small number (10%) were full-time students or unemployed.

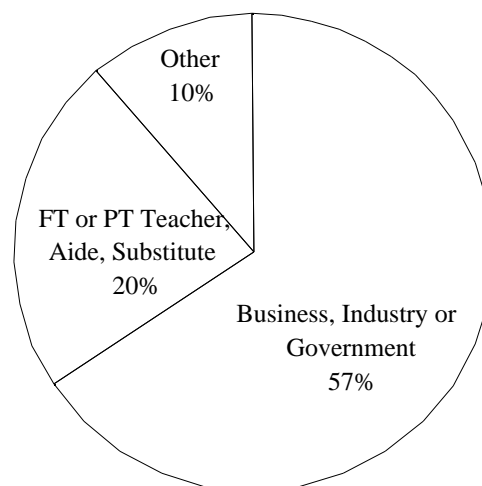


Figure 4.
Employment in Year Prior to Taking ARTC Position (N = 120)

Prior Education Course Work. Almost half of the candidates (46%) had taken one or more education courses prior to entering the program. Only 2 (2%) had prior certification (elementary).

Related Experience. Most candidates reported little or no experience related to teaching or working with children prior to entering the program. About one-third of candidates had taught full-time at some time before entering the program; another third had served as classroom aides,

paraprofessionals or substitute teachers at some time prior to taking their ARTC position. About one in five candidates had taught at the college level (20%), provided training for adults in business, industry, or the military (23%), volunteered in schools (16%) or coached youth teams (20%). About one-third (31%) reported volunteering in community youth programs like scouting, Sunday school, or Little League.

Attrition Among Candidates 1997 – 1998 to 1999 – 2000 Cohorts

Twenty of 81 candidates in the first three ARTC cohorts (25%) failed to complete the program.

There has, however, been a steady decline in the proportion of each cohort not completing the program from 38% of the 1997 – 1998 cohort to 23% of the 1998 – 1999 cohort to only 15% of the 1999 – 2000 cohort. Especially if these trends continue, attrition among ARTC candidates will compare very favorably to national statistics reported by the National Education Association, indicating that 20% of new hires leave teaching by the end of the first year.

Table 1
Attrition Among Candidates Enrolled in ARTC 1997 – 1999 (N = 81)

| COHORT: | 1997 – 1998 | 1998 – 1999 | 1999 – 2000 | TOTAL |
|------------------------------|--------------------|--------------------|--------------------|--------------|
| Number Enrolled | 26 | 22 | 33 | 81 |
| Number Not Completing | 10 | 5 | 5 | 20 |
| Resigned/Not Renewed | 7 (70%) | 3 (60%) | 3 (60%) | 13 (65%) |
| Moved Out-of-State | 1 (10%) | 1 (20%) | 1 (20%) | 3 (15%) |
| Other * | 2 (20%) | 1 (20%) | 1 (20%) | 4 (20%) |
| Percent Attrition | 38% | 23% | 15% | 25% |

* Includes 1 candidate whose program was eliminated from the district, 2 who became ineligible for the program by taking elementary or counseling positions in Delaware schools, and 1 who completed secondary Delaware certification via another route.

Comparison of Graduates and Non-Graduates (Appendix C)

The numbers thus far are small, but preliminary comparisons were made between selected characteristics of those who completed their ARTC course work and those who did not.

Based on this very limited experience with only two cohorts, no differences in program completion

were found based on gender or minority status. There was some tendency for successful candidates to

- be younger;
- be working in middle schools as opposed to high schools;
- to have taken some education courses prior to entering the program; and
- to have coached or worked with community youth groups prior to entering the program.

There was some tendency for less successful candidates to have

- entered teaching directly from another career in business, industry or government; or
- taught at the college level prior to entering ARTC.

At this point, these can only be regarded as very preliminary observations, but most are intuitively sensible: those who have worked with kids in or out of schools and shown prior interest (or actual experience) in teaching might be expected to make a smoother transition to high school teaching than those whose experience is primarily with adults and outside the school context.

Follow-up Survey of ARTC Graduates 1997 – 1998 to 1999 – 2000 Cohorts

Profile of Graduates (Appendix D)

Appendix D summarizes characteristics of candidates who have completed their ARTC course work. They do not differ substantially on any of these measures from all 120 candidates enrolled in the first four ARTC cohorts (Appendix B).

The 2001 Follow-Up Survey of ARTC Graduates (Appendix E)

Surveys were sent to all 61 graduates of the 1997 – 1998 to 1999 – 2000 ARTC cohorts and to their school supervisors. Surveys were designed to address the following questions:

- Are ARTC teachers staying?
- Are they succeeding in becoming certified and tenured?
- Are they effective in the classroom?

Surveys were returned by 57 supervisors (93%) and 59 graduates (96%). All supervisors of candidates teaching in Delaware public or charter schools returned surveys.

Are ARTC Teachers Staying?

As indicated in Table 2, almost all (96%) of the 61 ARTC graduates in the first three cohorts are still teaching in Delaware: 57 (93%) in Delaware public or charter schools and 2 (3%) in Delaware private schools. Only two (3%) have moved out of state (one is known to be teaching in New Jersey).

Table 2
Retention of ARTC Graduates (N=61)

| COHORT: | 1997 – 1998 | 1998 – 1999 | 1999 – 2000 | TOTAL |
|-----------------------------|--------------------|--------------------|--------------------|------------------|
| DE Public or Charter School | 15 (94%) | 15 (88%) | 27 (96%) | 57 (93%) |
| DE Private School | 1 (6%) | 1 (6%) | | 2 (3%) |
| Moved Out-of-State | | 1 (6%) | 1 (4%) | 2 (3%) |
| TOTAL | 16 (26%) | 17 (28%) | 28 (46%) | 61 (100%) |

Are ARTC Teachers Succeeding in Becoming Certified and Tenured?

As indicated in Table 3, of the 59 ARTC teachers who are still teaching in Delaware,

- 42 (71%) have completed all certification requirements and have either received their Standard Certificate or are waiting for the paperwork to be processed by DOE.
- 17 (29%) are still completing additional certification requirements, primarily additional courses in their content areas.
- 14 (24%) have been granted tenure.

Table 3
Certification & Tenure Status of ARTC Graduates (N=61)

| COHORT: | 1997 – 1998 | 1998 – 1999 | 1999 – 2000 | TOTAL |
|--|--------------------|--------------------|--------------------|------------------|
| Certification Requirements Complete: | 14 (93%) | 14 (82%) | 14 (52%) | 42 (71%) |
| <i>Certificate Issued</i> | 14 | 12 | 6 | |
| <i>Certificate In Process</i> | | 2 | 8 | |
| Certification Requirements Not Yet Complete: | 1 (7%) | 3 (18%) | 13 (48%) | 17 (29%) |
| <i>Need add'l content-area courses</i> | 1 | 3 | 11 | |
| <i>Need Praxis I</i> | | | 2 | |
| Tenured | 10 (67%) | 4 (23%) | | 14 (24%) |
| TOTAL | 15 (25%) | 17 (29%) | 27 (46%) | 59 (100%) |

As indicated in Table 4, among supervisors of the 25 candidates who have not already received (or completed requirements for) certification, only one does not plan to recommend certification.

Table 4
Supervisor Responses: Do you Plan to Recommend this Teacher for Certification?

| COHORT: | 1997 – 1998 | 1998 – 1999 | 1999 – 2000 | TOTAL |
|-------------------|--------------------|--------------------|--------------------|------------------|
| Already certified | 14 (93%) | 11 (69%) | 5 (21%) | 30 (55%) |
| Not yet eligible | | 1 (6%) | 4 (17%) | 5 (9%) |
| Yes | 1 (7%) | 3 (19%) | 15 (63%) | 19 (35%) |
| No | | 1 (6%) | | 1 (2%) |
| TOTAL | 15 (27%) | 16 (29%) | 24 (44%) | 55 (100%) |

Among the 40 candidates who have not already been granted tenure (Table 5),

- 7 are in positions (administrative or charter school) where tenure does not apply;
- 14 are not yet eligible;
- 18 will be recommended for tenure by their supervisors; and
- one will not be recommended for tenure by his/her supervisor.

Table 5
Supervisor Responses: Do you Plan to Recommend this Teacher for Tenure?

| COHORT: | 1997 – 1998 | 1998 – 1999 | 1999 – 2000 | TOTAL |
|------------------|--------------------|--------------------|--------------------|------------------|
| Already tenured | 10 (67%) | 4 (27%) | | 14 (26%) |
| N/A * | 2 (13%) | 4 (27%) | 1 (4%) | 7 (13%) |
| Not yet eligible | 1 (7%) | | 13 (54%) | 14 (26%) |
| Yes | 2 (13%) | 6 (40%) | 10 (42%) | 18 (33%) |
| No | | 1 (7%) | | 1 (2%) |
| TOTAL | 15 (28%) | 15 (28%) | 24 (44%) | 54 (100%) |

* teaching in a private or charter school, or in an administrative position where tenure is not applicable.

Are They Succeeding in the Classroom?

Supervisors were asked to compare the overall performance of their ARTC teacher with the performance of other teachers at similar points in their careers using a 5-point scale from "much poorer" to "much better." Almost all supervisors (89%) reported that their ARTC teachers were performing as well as or better than their peers, and half (48%) were rated better (Table 6). Only 6 ARTC teachers (11%) were rated as performing more poorly than their peers, and only one as "much poorer."

Table 6
Supervisor Responses:
Based on your Experience With Other Teachers at Similar Points in their Careers,
How Would you Compare the Overall Performance of your ARTC Teacher?

| COHORT: | 1997 – 1998 | 1998 – 1999 | 1999 – 2000 | TOTAL |
|--------------------|-------------|-------------|-------------|-----------|
| Much Better | 6 (43%) | 3 (19%) | 3 (12%) | 12 (21%) |
| Somewhat Better | 4 (29%) | 3 (19%) | 8 (31%) | 15 (27%) |
| About the Same | 4 (29%) | 8 (50%) | 11 (42%) | 23 (41%) |
| Somewhat Poorer | | 2 (13%) | 3 (12%) | 5 (9%) |
| Much Poorer | | | 1 (4%) | 1 (2%) |
| Mean | 4.1 | 3.4 | 3.3 | 3.5 |
| Standard Deviation | .86 | .96 | .98 | .96 |
| TOTAL | 14 (25%) | 16 (29%) | 26 (46%) | 56 (100%) |

Supervisors were also asked to evaluate their ARTC teacher's performance in several more specific domains of teaching on a 5-point scale from 1 = "very weak" to 5 = "very strong." As indicated in Table 7, ARTC teachers are perceived as "strong" across all dimensions.

Table 7
Supervisor Responses: How Would You Rate This Teacher's . . .

| COHORT: | 1997 – 1998 | | 1998 – 1999 | | 1999 – 2000 | | TOTAL | |
|--|-------------|-------|-------------|-------|-------------|-------|------------|-------|
| | Mean | Stdev | Mean | Stdev | Mean | StDev | Mean | StDev |
| How would you rate this teacher's . . . * | | | | | | | | |
| conscientiousness as a teacher? | 4.6 | .51 | 3.9 | .93 | 4.3 | .87 | 4.3 | .80 |
| knowledge of subject matter? | 4.6 | .63 | 4.1 | .89 | 4.1 | .82 | 4.2 | .79 |
| rapport with students? | 4.4 | .76 | 4.1 | .68 | 3.9 | .95 | 4.1 | .83 |
| ability to engage students in active learning? | 4.3 | .83 | 3.7 | .60 | 3.8 | 1.1 | 3.9 | .89 |
| management of student behavior & activities? | 4.3 | .83 | 3.9 | .93 | 3.6 | 1.1 | 3.9 | .98 |
| use of effective instructional strategies? | 4.4 | .75 | 3.5 | .82 | 3.6 | .90 | 3.8 | .84 |

* 1 = very weak, 2 = weak, 3 = adequate, 4 = strong, 5 = very strong

Based on their experiences with these teachers, 96% of supervisors would be "somewhat" or "very likely" to recommend hiring another ARTC teacher in the future (Table 8). The remaining 4% were not sure.

Table 8
Supervisor Responses:
Based on your Experience with this Teacher, How Likely is it that you would Recommend Hiring an ARTC Teacher in the Future?

| COHORT: | 1997 – 1998 | 1998 – 1999 | 1999 – 2000 | TOTAL |
|-------------------|-----------------|-----------------|-----------------|------------------|
| very likely | 12 (92%) | 14 (88%) | 20 (91%) | 46 (90%) |
| somewhat likely | 1 (8%) | 1 (6%) | 1 (5%) | 3 (6%) |
| not at all likely | | | | |
| don't know | | 1 (6%) | 1 (5%) | 2 (4%) |
| TOTAL | 13 (25%) | 16 (32%) | 22 (43%) | 51 (100%) |

2000 – 2001 Enrollment Projections

Seventeen new candidates have already been enrolled in the 2001 – 2002 cohort. These candidates represent 7 content areas (Table 9) and 7 districts: Brandywine, Caesar Rodney, Christina, Colonial, Laurel, New Castle County Vo-Tech, Red Clay, and Seaford.

Table 9
Candidates Enrolled in the 2001 – 2002 Cohort as of April 1, 2001

| Content Areas | Univ of DE COHORT | Del State U COHORT | TOTAL |
|------------------------------|------------------------------|-------------------------------|--------------|
| Business | 1 | 1 | 2 |
| English | 1 | 1 | 2 |
| Foreign Languages | 2 | | 2 |
| Health or Physical Education | | 2 | 2 |
| Mathematics | 2 | | 2 |
| Sciences | 4 | | 4 |
| Technology Education | 3 | | 3 |
| TOTAL | 13 | 4 | 17 |

Table 10 summarizes current enrollment projections for the 2001 Summer Institutes, assuming no attrition among current candidates who are expected to complete their course work in July and August. With the addition of a second session at UD, all candidates currently enrolled for the 2001 – 2002 cohort will be able to begin with the 2001 Summer Institute. Additional candidates can be accommodated.

Table 10
Enrollment for Summer 2001 as of April 1, 2001

| | | 2000 - 01 Cohort | 2001 – 02 Cohort | Total (max 20) |
|-------------------|-------------|-------------------------|-------------------------|-----------------------|
| UD Cohort | July 2001 | 9 | 13 | 22 * |
| | August 2001 | 6 | 13 | 19 |
| DSU Cohort | July 2001 | 4 | 4 | 8 |
| | August 2001 | 3 | 4 | 7 |

* 2 sessions are planned at UD to accommodate all candidates.

Appendix A.
District and School Participation
1997 – 1998 to 2000 – 2001 Cohorts (N=120)

| | | | |
|----------------------------------|-----------|-----------------------------------|-----------|
| NEW CASTLE COUNTY | 75 | KENT & SUSSEX COUNTIES | 45 |
| APPOQUINIMINK | 6 | CAESAR RODNEY | 9 |
| Middletown High School | 4 | Caesar Rodney High School | 8 |
| Middletown Middle School | 2 | Fifer Middle School | 1 |
| BRANDYWINE | 15 | CAPE HENLOPEN | 3 |
| Concord High School | 2 | Cape Henlopen High School | 3 |
| D.A.P.I. | 1 | | |
| Brandywine High School | 3 | CAPITAL | 7 |
| Hanby Middle School | 1 | Central Middle School | 1 |
| Mt Pleasant High School | 3 | Dover High School | 6 |
| Talley Middle School | 5 | | |
| CHRISTINA | 16 | DELMAR | 2 |
| Christiana High School | 1 | Delmar High School | 1 |
| Gauger-Cobbs Middle School | 3 | Delmar Middle School | 1 |
| Glasgow High School | 5 | INDIAN RIVER | 13 |
| Kirk Middle School | 2 | Indian River High School | 4 |
| Newark High School | 4 | Selby Middle School | 1 |
| Shue-Medill Middle School | 1 | Sussex Central High School | 8 |
| COLONIAL | 5 | LAUREL | 4 |
| William Penn High School | 4 | Laurel High School | 4 |
| George Read Middle School | 1 | | |
| RED CLAY | 19 | MILFORD | 4 |
| AI duPont High School | 4 | Milford High School | 3 |
| AI duPont Middle School | 1 | Milford Middle School | 1 |
| Cab Calloway School of the Arts | 1 | WOODBIDGE | 1 |
| Conrad Middle School | 2 | Woodbridge High School | 1 |
| Dickinson High School | 3 | | |
| McKean High School | 5 | CHARTER | 1 |
| Positive Learning Center | 1 | Positive Outcomes Charter School | 1 |
| Skyline Middle School | 1 | | |
| Stanton Middle School | 1 | | |
| NEW CASTLE CO VO-TECH | 2 | | |
| Ferris School for Boys | 1 | | |
| Hodgson Vo-Tech High School | 1 | | |
| CHARTERS | 12 | | |
| Richard Milburn Academy | 2 | | |
| The Charter School of Wilmington | 10 | | |

Appendix B.
Profile of All Candidates Enrolled in ARTC
1997 – 1998 to 2000 – 2001 Cohorts
(N = 120)

| COHORT: | 1997-1998 | 1998-1999 | 1999-2000 | 2000-2001 | TOTAL |
|------------------------------|------------------|------------------|------------------|------------------|--------------|
| STATUS IN PROGRAM | | | | | |
| Graduates | 16 (61%) | 17 (77%) | 26 (79%) | n/a | 59 (49%) |
| Extended to Complete | | | 2 (6%) | 4 (10%) | 6 (5%) |
| Did Not Complete Program | 10 (39%) | 5 (23%) | 5 (15%) | 2 (5%) | 22 (18%) |
| Currently Enrolled | | | | 33 (85%) | 33 (28%) |
| RECRUITMENT | | | | | |
| thru ARTC | 1 (4%) | 4 (18%) | 17 (52%) | 20 (51%) | 42 (35%) |
| thru Schools | 25 (96%) | 18 (82%) | 16 (49%) | 19 (49%) | 78 (65%) |
| GENDER | | | | | |
| Female | 7 (27%) | 15 (68%) | 17 (52%) | 18 (46%) | 57 (48%) |
| Male | 19 (73%) | 7 (32%) | 16 (49%) | 21 (54%) | 63 (53%) |
| MINORITY STATUS | | | | | |
| Minority | 8 (31%) | 4 (23%) | 11 (33%) | 8 (20%) | 32 (27%) |
| Non-Minority | 18 (69%) | 17 (77%) | 33 (67%) | 31 (80%) | 88 (73%) |
| AGE | | | | | |
| 20 – 29 | 8 (31%) | 7 (32%) | 12 (37%) | 16 (41%) | 43 (36%) |
| 30 – 39 | 14 (54%) | 11 (50%) | 15 (46%) | 11 (28%) | 51 (43%) |
| 40 – 49 | 3 (12%) | 2 (9%) | 5 (15%) | 8 (21%) | 18 (15%) |
| 50 + | 1 (4%) | 2 (9%) | 1 (3%) | 4 (10%) | 8 (7%) |
| HIGHEST DEGREE EARNED | | | | | |
| Bachelor's | 16 (62%) | 14 (64%) | 22 (67%) | 22 (56%) | 74 (62%) |
| Master's | 4 (15%) | 3 (14%) | 9 (27%) | 11 (28%) | 27 (23%) |
| Doctorate | 1 (4%) | 3 (14%) | 1 (3%) | 1 (3%) | 6 (5%) |

| COHORT: | 1997-1998 | 1998-1999 | 1999-2000 | 2000-2001 | TOTAL |
|--------------------------------------|------------------|------------------|------------------|------------------|--------------|
| GPA FOR HIGHEST DEGREE EARNED | | | | | |
| 2.0 - 2.4 | 4 (27%) | 1 (8 %) | 7 (25%) | 2 (6%) | 14 (16%) |
| 2.5 - 2.9 | 4 (27%) | 4 (33%) | 6 (21%) | 9 (28%) | 23 (26%) |
| 3.0 - 3.4 | 5 (33%) | 5 (42%) | 8 (29%) | 8 (25%) | 26 (30%) |
| 3.5 - 4.0 | 2 (13%) | 2 (17%) | 7 (25%) | 13 (41%) | 24 (28%) |
| LEVEL TAUGHT | | | | | |
| High School | 20 (80%) | 18 (78%) | 34 (87%) | 17 (81%) | 88 (82%) |
| Middle School | 5 (20%) | 5 (22%) | 5 (13%) | 4 (19%) | 19 (18%) |
| SUBJECT AREA | | | | | |
| Sciences | 7 (27%) | 6 (27%) | 7 (21%) | 5 (13%) | 25 (21%) |
| Business | 10 (38%) | 4 (18%) | 4 (12%) | 5 (13%) | 23 (19%) |
| Foreign Languages | 3 (12%) | 6 (27%) | 2 (6 %) | 7 (18%) | 18 (15%) |
| Technology Education | 3 (12%) | 2 (9 %) | 3 (9 %) | 5 (13%) | 13 (11%) |
| Mathematics | | 2 (9 %) | 3 (9 %) | 7 (18%) | 12 (10%) |
| English | | | 4 (12%) | 5 (13%) | 9 (8%) |
| Agriculture | 2 (8 %) | 2 (9 %) | 1 (3 %) | 1 (3%) | 6 (5%) |
| Social Studies | | | 4 (12%) | 1 (3%) | 5 (4%) |
| Computer Science | 1 (4 %) | | | 2 (5%) | 3 (3%) |
| Other | | | 5 (15%) | 1 (3%) | 6 (6%) |
| PRIOR EMPLOYMENT + | | | | | |
| Industry (1-26 yrs) | 5 (20%) | 5 (23%) | 4 (13%) | 6 (16%) | 20 (17%) |
| Business (1-27 yrs) | 10 (40%) | 5 (24%) | 12 (39%) | 13 (35%) | 40 (35%) |
| Govt/Soc Serv (1-11 yrs) | 1 (2 %) | 3 (7 %) | 3 (5 %) | 4 (5%) | 11 (5 %) |
| F/PT Teaching (.5-17 yrs) | 8 (16%) | 9 (21%) | 16 (26%) | 16 (22%) | 46 (20%) |
| FT Student (.5-5 yrs) | 1 (4%) | 2 (10%) | 3 (10%) | 4 (11%) | 10 (9%) |
| At Home/Unemployed | | 2 (5 %) | 1 (2 %) | | 3 (1 %) |
| PRIOR ED COURSES | | | | | |
| None | 10 (40%) | 13 (62%) | 19 (61%) | 19 (51%) | 61 (54%) |
| One or More | 15 (60%) | 8 (38%) | 12 (39%) | 18 (49%) | 53 (46%) |
| PRIOR CERTIFICATION | | | | | |
| Yes | 2 (8%) | 0 (0%) | 0 (0%) | 0 (0%) | 2 (2%) |

| COHORT: | 1997-1998 | 1998-1999 | 1999-2000 | 2000-2001 | TOTAL |
|-----------------------------|------------------|------------------|------------------|------------------|-------------------|
| RELATED EXPERIENCE + | | | | | |
| College Teaching (1-16 yrs) | 3 (12%) | 4 (18%) | 7 (23%) | 9 (25%) | 23 (20%) |
| FT Teaching (1-17 yrs) | 8 (32%) | 6 (28%) | 13 (42%) | 10 (27%) | 37 (32%) |
| Sub or Aide (.25-5 yrs) | 11 (22%) | 12 (28%) | 23 (37%) | 28 (38%) | 74 (32%) |
| School Volunteer (1-8 yrs) | 2 (7%) | 6 (29%) | 1 (3%) | 9 (24%) | 18 (16%) |
| Coaching (1-13 yrs) | 2 (8%) | 3 (14%) | 10 (32%) | 8 (18%) | 23 (20%) |
| Youth Programs (1-15 yrs) | 4 (8%) | 9 (21%) | 19 (31%) | 15 (20%) | 35 (31%) |
| Adult Ed (1-22 yrs) | 1 (4%) | 5 (24%) | 7 (23%) | 13 (35%) | 26 (23%) |
| COHORT TOTALS | 25 (23%) | 23 (22%) | 39 (36%) | 21 (19%) | 120 (100%) |

+ Total percents within cohorts may exceed 100% due to individuals with more than one job in the year prior to entering ARTC; percents are based on the number within each cohort for which data is available.

Appendix C.
Comparison of Graduates and Non Graduates
1997 – 1998 to 1999 – 2000 Cohorts
(N = 81)

| | Graduates | Non-Graduates |
|------------------------------|-----------|---------------|
| GENDER | | |
| Female | 30 (77%) | 9 (23%) |
| Male | 31 (%) | 11 (26%) |
| MINORITY STATUS | | |
| Minority | 18 (75%) | 6 (25%) |
| Non-Minority | 43 (75%) | 14 (25%) |
| AGE | | |
| 20 – 29 | 20 (74%) | 7 (26%) |
| 30 – 39 | 32 (80%) | 8 (20%) |
| 40 – 49 | 7 (70%) | 3 (30%) |
| 50 + | 2 (50%) | 2 (50%) |
| HIGHEST DEGREE EARNED | | |
| Bachelors | 42 (100%) | 0 (0%) |
| Masters or Doctorate | 18 (86%) | 3 (14%) |
| GPA | | |
| 2.0 to 2.9 | 24 (92%) | 2 (8%) |
| 3.0 to 4.0 | 28 (97%) | 1 (3%) |
| LEVEL TAUGHT | | |
| High School | 45 (70%) | 20 (30%) |
| Middle School | 16 (100%) | |
| PRIOR ED COURSES | | |
| None | 30 (71%) | 12 (29%) |
| One or more | 31 (89%) | 4 (11%) |
| PRIOR EMPLOYMENT | | |
| Business or Industry | 31 (70%) | 13 (30%) |
| Govt/Social Services | 5 (71%) | 2 (29%) |
| FT or PT Teaching | 21 (84%) | 4 (16%) |
| Other | 7 (100%) | |
| RELATED EXPERIENCE | | |
| College Teaching | 10 (71%) | 4 (29%) |
| Teaching FT/PT/Sub | 40 (80%) | 10 (20%) |
| Prior Youth Experience | 32 (89%) | 4 (11%) |
| Adult Education | 10 (77%) | 3 (23%) |

Appendix D.
Profile of ARTC Graduates
1997 – 1998 to 1999 – 2000 Cohorts
(N=59)

| | | | |
|---|----------|---------------------------------|----------|
| ETHNICITY | | AGE | |
| African-American | 13 (22%) | 20 – 29 | 18 (31%) |
| Asian | 1 (2%) | 30 – 39 | 32 (54%) |
| Hispanic | 4 (7%) | 40 – 49 | 7 (12%) |
| White | 41 (70%) | 50 + | 2 (3%) |
| SEX | | SUBJECT AREA | |
| Female | 29 (49%) | Agriculture | 2 (3%) |
| Male | 30 (51%) | Art | 1 (2%) |
| | | Business | 14 (24%) |
| | | English | 3 (5%) |
| HIGHEST DEGREE EARNED | | Foreign Language | 7 (12%) |
| Bachelor | 40 (69%) | Mathematics | 3 (5%) |
| Master's | 15 (26%) | Music | 1 (2%) |
| Doctorate | 3 (5%) | Other | 1 (2%) |
| | | Science | 16 (27%) |
| GPA | | Social Studies | 4 (12%) |
| 2.0 - 2.4 | 11 (22%) | Tech Ed | 7 (12%) |
| 2.5 –2.9 | 11 (22%) | | |
| 3.0 - 3.4 | 17 (34%) | LEVEL TAUGHT | |
| 3.5 - 4.0 | 11 (22%) | High School | 43 (73%) |
| | | Middle School | 16 (27%) |
| PREVIOUS EXPERIENCE WITH TEACHING OR YOUTH | | EMPLOYMENT PRIOR TO ARTC | |
| Youth Programs | 31 (53%) | Business, Industry, Govt | 35 (60%) |
| FT/PT/Sub Teaching | 39 (66%) | Teaching | 21 (36%) |
| College Teaching | 10 (17%) | Other | 7 (12%) |
| Adult Education | 10 (17%) | | |

Appendix E. Survey of Supervisors of ARTC Graduates February 2001

Name of Supervisor: «SUPERVISOR»

What is your position in the school? _____

How long has this teacher worked in your school? _____

How long have you supervised this teacher? _____

I. Are ARTC teachers staying?

Is this teacher still teaching in your school? yes no

If no, has this teacher taken a job at another school? where? _____
 left teaching? when? _____
 why? resigned not renewed
 other: _____

II. Are ARTC teachers succeeding?

Based on your experience with other teachers at similar points in their careers, how would you compare the overall performance of your ARTC teacher?

much poorer somewhat poorer about the same somewhat better much better

Have you recommended this teacher for certification? yes no N/A
 for tenure? yes no N/A

If no, do you plan to recommend this teacher for certification? yes no not sure N/A
 for tenure? yes no not sure N/A

Based on your experience with this teacher, how likely is it that you would recommend hiring an ARTC teacher in the future? don't know not at all likely somewhat likely very likely

III. What are their strengths and weaknesses?

How would you rate this teacher's

| | <i>don't know</i> | <i>very weak</i> | <i>weak</i> | <i>adequate</i> | <i>strong</i> | <i>very strong</i> |
|--|-------------------|------------------|-------------|-----------------|---------------|--------------------|
| knowledge of subject matter? | 0 | 1 | 2 | 3 | 4 | 5 |
| use of effective instructional strategies? | 0 | 1 | 2 | 3 | 4 | 5 |
| ability to engage students in active learning? | 0 | 1 | 2 | 3 | 4 | 5 |
| rapport with students? | 0 | 1 | 2 | 3 | 4 | 5 |
| management of student behavior and activities? | 0 | 1 | 2 | 3 | 4 | 5 |
| conscientiousness as a teacher? | 0 | 1 | 2 | 3 | 4 | 5 |