

# Data Trends and Briefings



North Carolina Community College System  
Planning, Accountability, Research & Evaluation

## **Graduation and retention rate as a measure of student achievement: A longitudinal look at the curriculum student registration files from system-wide perspectives, 1997-98 to 2000-01**

Studies conducted by the National Center for Education Statistics (NCES) support a positive correlation between student academic aspiration and their academic achievement. In light of this, it is meaningful to study students' academic achievement by comparing their retention and graduation rates to their long-term goals.

This study is based on the assumption that a student's long-term goal remains an accurate indicator of initial intent for pursuit of a curriculum program. The Data Warehouse in the NCCCS from which the data for this study were extracted uses six categories of student long-term goals (Goal number was assigned arbitrarily):

- Enhance employment skill for new field of work (Goal 1)
- Enhance job skills in present field of work (Goal 2)
- Obtain an Associate degree, Diploma or Certificate (Goal 3)
- Take courses for personal enrichment or interest (Goal 4)
- Take courses to transfer to another college (Goal 5)
- Data unavailable (Goal 0)

The data were pulled from Curriculum Student – State Universe, Student Progress – Common Info Class of the Data Warehouse. The degree code was classified to Associate, Certificate, Diploma, and Transitional. For the purpose of analysis to obtain retention and graduation rates, Transitional programs were excluded.

The associate degree code includes Associate in Applied Science (AAS), Associate in Arts (AA), Associate in Fine Arts (AFA), Associate in General Education (AGE), and Associate in Science (AS). Across the categories of student's long-term goal, the number of students in AAS was greatest, followed by the one in AA programs. The total number of students in curriculum programs were increasing every year: 158,614 (1997-98), 170,312 (1998-99, 7.4% increase from the previous year), 177,293 (1999-2000, 4.7% increase), and 180,626 (2000-01, 1.9% increase). Please refer to Table 2 for details.

In the current analysis, retention rates and graduation rates were combined to give a better picture of student achievement, in terms of their long-term goals. Since Goal 1 and 2 are similar in nature (*Enhance employment skill for new field of work*, and *Enhance job skills in present field of work*, respectively), they were combined. Please refer to Table 1 for the summary. For a thorough analysis, an Appendix can be found at the end of this briefing; in it, retention and graduation rates were separately presented as well as the two rates combined (Graduation + Retention rate), including Goal 0 (*Data Unavailable*).

Table 1. Retention and Graduation Rate Combined by Student’s Long-term Goal, from 1997-98 to 2000-01

	1997-98	1998-99	1999-2000	2000-01
Goal 1 & 2 (Enhance current/ future employment skills)	46.9%	45.3%	45.8%	48.5%
Goal 3 (Obtain an Associate degree, Diploma, or Certificate)	54.5%	53.8%	53.3%	56.1%
Goal 4 (Take courses for personal enrichment or interest)	46.4%	48.7%	47.8%	52.2%
Goal 5 (Take courses to transfer to another college)	48.2%	48.3%	48.3%	50.1%

\*Source: Data Warehouse, NCCCS, Curriculum Student – State Universe

As seen in Table 1, the combined rates ranged from a low of 45.3% in 1998-99, Goal 1 & 2 to a high of 56.1% in 2000-01, Goal 3. Among the students who indicated their goals were to obtain an Associate degree, Diploma, or Certificate in 2000, 56.1% were either retained or graduated in 2001. On the other hand, 45.3% of students who indicated their goals to enhance current and/or future employment skills in 1998 were retained or graduated the next year – 10.8% difference from Goal 3 in 2000-01.

Table 1 and Figure 1 indicated that graduation and retention rates combined were consistently highest for Goal 3: *Obtain an Associate degree, Diploma, or Certificate*. The rates for Goal 5 (*Take courses to transfer to another college*) were almost constant over the years. Another point of note is that combined rates were steadily increasing in Goal 4 from 1998 to 2001. During the five year period, an average of 48.7% of students who indicated their long term goal was to take courses for personal enrichment or interest, whether they pursued an associate degree, certificate or diploma, either finished their programs and/or was retained the next year.

The combined rates were lowest for Goal 1 & 2, who indicated their goals were to enhance current/future job skills. In other words, a relatively low proportion of students finished or continued their program of studies in Goals 1 and 2. Since their goals were to get or enhance future and/or current job skills, it may not be as important as other groups of students to graduate or continue their program of study next year, as long as they learned what they needed to. Another alternative explanation might be their current job responsibilities hinder them from achieving what they wanted to achieve.

The combined rates and the number of students by their long-term goal can be found in the Table 2. The number of students in Associate degrees category across the Goals except Goal 4 (*Take courses for personal enrichment or interest*) were increasing over the years. For Goal 3, the number of students seeking a Certificate grew markedly in each year: 6.5%, 14.6%, and 17.0% respectively. That one can earn a certificate in a semester as a full-time student might be a factor for the increasing number of students in this category.

The combined rates in Goal 3, Certificate seeking, were also consistently higher than other categories. It ranges from 57.9% to 62.9% with a good number of students ranging from a low of 11,312 in 1997-98 to a high of 16,165 in 2000-01. The overall weighted-average combined rate in Goal 3 was 54.4% over the five-year period. In terms of

number of students in each category, an Associate degree-seeking students for Goal 3 was greatest – 90,300 in 1998 to 102,798 in 2001 – followed by the one in Goal 5, Associate degree category – 26,237 in 1998 to 30,599 in 2001 (16.6% growth over the years).

Table 2. Curriculum Student Retention and Graduation Rate Combined by Student’s Long Term Goals, from 1997-98 to 2000-01

	1997-98	N	1998-99	N	1999-2000	N	2000-01	N
<b>Goal 1 &amp; 2 (Enhance current job skills/ future employment skills)</b>								
Associate	47.9%	5,963	46.8%	6,184	46.9%	6,521	49.6%	6,196
Certificate	47.2%	3,734	43.6%	4,527	43.5%	4,554	47.1%	4,515
Diploma	43.4%	1,980	44.6%	1,906	48%	1,676	48.1%	1,614
<b>Total</b>	<b>46.9%</b>	<b>11,677</b>	<b>45.3%</b>	<b>12,617</b>	<b>45.8%</b>	<b>12,751</b>	<b>48.5%</b>	<b>12,325</b>
<b>Goal 3 (Obtain an Associate degree, Diploma or Certificate)</b>								
Associate	54.3%	90,300	53.4%	97,899	52.4%	102,334	55.3%	102,798
Certificate	58%	11,312	57.9%	12,052	60.1%	13,813	62.9%	16,165
Diploma	53.1%	13,060	53.2%	13,327	53.1%	12,775	54.2%	12,848
<b>Total</b>	<b>54.5%</b>	<b>114,672</b>	<b>53.8%</b>	<b>123,278</b>	<b>53.3%</b>	<b>128,922</b>	<b>56.1%</b>	<b>131,811</b>
<b>Goal 4 (Take courses for personal enrichment or interest)</b>								
Associate	45.9%	3,561	46.1%	3,383	45.6%	3,543	50.5%	3,403
Certificate	52.7%	1,113	60.3%	1,200	56.6%	1,279	61.6%	1,195
Diploma	39.6%	765	40.3%	591	41.9%	552	41.8%	531
<b>Total</b>	<b>46.4%</b>	<b>5,439</b>	<b>48.7%</b>	<b>5,174</b>	<b>47.8%</b>	<b>5,374</b>	<b>52.2%</b>	<b>5,129</b>
<b>Goal 5 (Take courses to transfer to another college)</b>								
Associate	47.9%	26,237	48.1%	28,688	47.6%	29,451	49.6%	30,599
Certificate	65.1%	241	67.2%	229	93.4%	438	75.6%	460
Diploma	55.4%	348	53.1%	326	53.5%	357	58.6%	302
<b>Total</b>	<b>48.2%</b>	<b>26,826</b>	<b>48.3%</b>	<b>29,243</b>	<b>48.3%</b>	<b>30,246</b>	<b>50.1%</b>	<b>31,361</b>

Dr. Soyoun C. Yim  
 Planning, Accountability, Research & Evaluation  
 N.C. Community College System  
 200 West Jones Street  
 Mail Service Center 5006  
 Raleigh, NC 27699-5006  
 (919) 807-6981  
[yims@ncccommunitycolleges.edu](mailto:yims@ncccommunitycolleges.edu)

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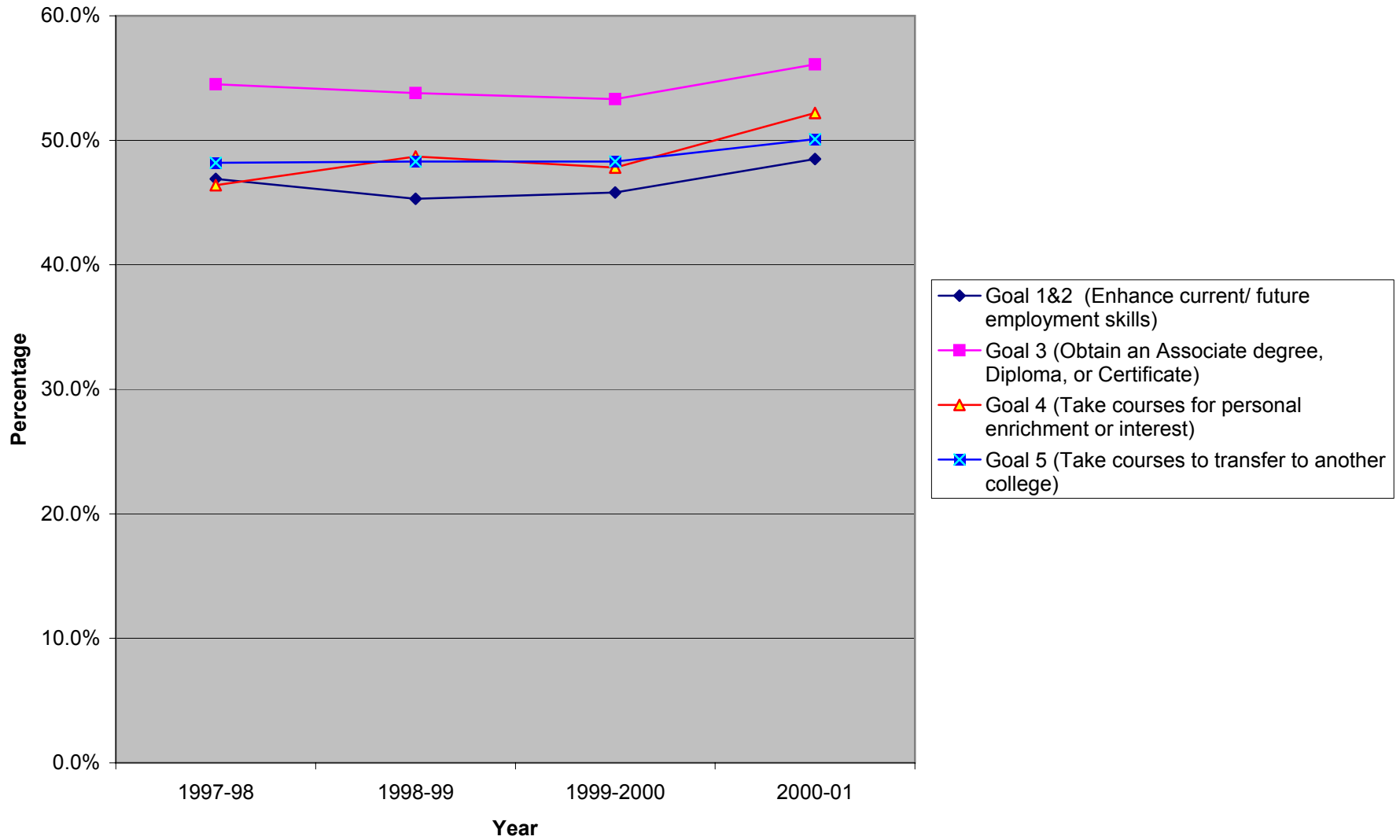
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**Figure 1. Retention & Graduation Rate Combined by Student Long Term Goals**



Appendix: Graduation and retention rate by student's long term goal and degree pursued at the NCCCS, 1997-2000

	G97-98	R97-98	G+R	G98-99	R98-99	G+R	G99-00	R99-00	G+R	G00-01	R00-01	G+R
<b>Goal 0 (Data unavailable)</b>												
Associate Degree (AAS, AA, AFA, AGE, AS)	5.7	41	<b>46.7</b>	5.6	46.4	<b>52</b>	7	40.9	<b>47.9</b>	6.5	44.3	<b>50.8</b>
Certificate	14.4	18.1	<b>32.5</b>	36.2	32.9	<b>69.1</b>	32.2	28.5	<b>60.7</b>	36.7	30.8	<b>67.5</b>
Diploma	5.3	41.7	<b>47</b>	5	33.9	<b>38.9</b>	11.2	37.8	<b>49</b>	21.2	31.1	<b>52.3</b>
<b>Goal 1 (Enhance employment skill for new field of work)</b>												
Associate Degree (AAS, AA, AFA, AGE, AS)	9.8	40.6	<b>50.4</b>	8.3	41.4	<b>49.7</b>	7.7	41.7	<b>49.4</b>	8.4	43.4	<b>51.8</b>
Certificate	42.1	11.4	<b>53.5</b>	38.6	11.7	<b>50.3</b>	36.6	11.9	<b>48.5</b>	38.4	13.9	<b>52.3</b>
Diploma	13.5	32.7	<b>46.2</b>	10.9	33.5	<b>44.4</b>	14.9	35.1	<b>50</b>	14.3	34.2	<b>48.5</b>
<b>Goal 2 (Enhance job skills in present field of work)</b>												
Associate Degree (AAS, AA, AFA, AGE, AS)	5.3	37.9	<b>43.2</b>	5	37.2	<b>42.2</b>	5.4	37.8	<b>43.2</b>	5.6	40.9	<b>46.5</b>
Certificate	20.1	15.5	<b>35.6</b>	17.6	16.5	<b>34.1</b>	17.4	18.7	<b>36.1</b>	21.4	18.2	<b>39.6</b>
Diploma	10.1	24.1	<b>34.2</b>	11.3	25.7	<b>37</b>	11.9	29.8	<b>41.7</b>	14	32.7	<b>46.7</b>
<b>Goal 3 (Obtain an Associate degree, Diploma or Certificate)</b>												
Associate Degree (AAS, AA, AFA, AGE, AS)	11.7	42.6	<b>54.3</b>	9.9	43.5	<b>53.4</b>	9.6	42.8	<b>52.4</b>	9.9	45.4	<b>55.3</b>
Certificate	35.7	22.3	<b>58</b>	33.6	24.3	<b>57.9</b>	34.3	25.8	<b>60.1</b>	34.6	28.3	<b>62.9</b>
Diploma	20.5	32.6	<b>53.1</b>	20.1	33.1	<b>53.2</b>	20.1	33	<b>53.1</b>	20.1	34.1	<b>54.2</b>
<b>Goal 4 (Take courses for personal enrichment or interest)</b>												
Associate Degree (AAS, AA, AFA, AGE, AS)	8.7	37.2	<b>45.9</b>	6.3	39.8	<b>46.1</b>	5.9	39.7	<b>45.6</b>	7.2	43.3	<b>50.5</b>
Certificate	33.8	18.9	<b>52.7</b>	37.4	22.9	<b>60.3</b>	35.7	20.9	<b>56.6</b>	37.1	24.5	<b>61.6</b>
Diploma	12.8	26.8	<b>39.6</b>	12	28.3	<b>40.3</b>	15	26.9	<b>41.9</b>	16.2	25.6	<b>41.8</b>
<b>Goal 5 (Take courses to transfer to another college)</b>												
Associate Degree (AAS, AA, AFA, AGE, AS)	5.7	42.2	<b>47.9</b>	5	43.1	<b>48.1</b>	5.1	42.5	<b>47.6</b>	5.4	44.2	<b>49.6</b>
Certificate	33.6	31.5	<b>65.1</b>	37.1	30.1	<b>67.2</b>	52.5	40.9	<b>93.4</b>	43.7	31.9	<b>75.6</b>
Diploma	14.9	40.5	<b>55.4</b>	18.7	34.4	<b>53.1</b>	20.7	32.8	<b>53.5</b>	19.2	39.4	<b>58.6</b>

\*Data Source: Data Warehouse, NCCCS, Curriculum Student - State Universe.

\*\*G97-98: graduation rate in 97-98; R97-98: retention rate in 97-98; G+R: graduation and retention rate combined.