

# SUPPLEMENTAL TO DATA VALIDATION REPORT: NEVADA CONNECTIONS ACADEMY, 2016 DATA

## 2015 DATA VALIDATION SUPPLEMENTAL

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### NEVADA CONNECTIONS ACADEMY 2015 DATA

The purpose of this supplemental is to include validation of 2015 data in conjunction with the *Data Validation Report: Nevada Connections Academy 2016 Data*. The same sentence structure used in illustrating data-driven statements and graduation calculations found in the previous report (i.e., *Data Validation Report: Nevada Connections Academy 2016 Data*) are the same in this supplemental. The difference between this supplemental and the 2016 Data Validation Report is the numerical differences from 2016 to 2015. The decision to add 2015 supplemental material is to provide the State Public Charter School Authority (SPCSA) with verified data from more than one year and describe year to year differences. The same data-driven sentence structures and graduation rates are provided here as to explicitly show what was examined and assessed for validity.

Thus, as a supplemental to the 2016 data validation report the following sections still align with work conducted for NCA 2015 data. The same verbiage and intention found in the following 2016 data validation report are consistent with this supplemental in describing the following sections: Purpose, Policy Compliance, Scope of Validation, Objectives. The Critical Assessment (i.e., section also found in the 2016 data validation report) of variables and calculations are all the same except that the data is from 2015, which changes the numerical outcomes but retains the same meaning. The only exception to the verbiage in the 2016 validation report is the notion of the supplemental describing 2015 data and a comparison of 2016 to 2015 data.

There is a logical structure or template NCA utilized in framing their statements and calculations as well as a logical structure in arranging the 2016 data validation report. Because NCA’s logical structure was identifiable, their logical structure (also logical presentation of information) was used to extend the same logical structure to directly address any evaluator concerns and takeaways of the 2015 data. The evaluator was the same (Dr. Tiberio Garza) and assessed 2015 data for validity and operationalized findings into the ability to replicate NCA results, given the data and definitions provided (definitions are the same from the 2016 data validation report). The same data file types were provided by NCA for 2015 when comparing data files used in the 2016 data validation report. The consistency of the same data files and structure of data-driven statements continues to demonstrate consistency on NCA’s part and fosters transparency when the evaluator examines validity and replicability in the 2015 data.

Data files provided for 2015 (e.g., the same as 2016)

- An excel file with 2015 cohort data
- A word document with 2015 statements and calculations to be validated
- A word document serving as a legend to the 2015 cohort data and methodology
- A 2015 school district data file pertaining to credit deficient categories

Table 1 is a summary of 2015 data going through assessment of background variables and replication of calculations, which was the method in validating the numerical values being proclaimed by NCA. The same process described in the previous report was used for the 2015 data.

**Table 1. *Reproduced from the 2016 Data Validation Report for Assessing 2015 Data***

<b>Description–2015 Data</b>	<b>Error-type examined</b>	<b>Results</b>	<b>Consensus</b>
Background Information* (335 students)	Duplication; Missingness; Abnormal or usual entries;	Threshold limits upheld; Missing values were minimal	Accepted

**Table 1. Reproduced from the 2016 Data Validation Report for Assessing 2015 Data**

<b>Description–2015 Data</b>	<b>Error-type examined</b>	<b>Results</b>	<b>Consensus</b>
Graduation rate by Nevada state law	Calculation; Consistency with other calculations	42.8% graduation rate	Reached
Graduation rate by Nevada state law + not classifying 5th year grads as non-graduates	Calculation; Consistency with other calculations	45.4% graduation rate	Reached
Graduation rate by federal ACGR + not classifying students enrolling one semester or more behind as non-graduates	Calculation; Consistency with other calculations	57.2% graduation rate	Accepted
Graduation rate by students enrolled at NCA for all four years of high school	Calculation; Consistency with other calculations	83.8% graduation rate	Accepted
Cohort: Credit deficient status upon enrollment at NCA and economically disadvantaged category composition	Calculation; Consistency with other calculations	Matched estimates	Reached
Non-graduates: Credit deficiency status upon enrollment	Calculation; Consistency with other calculations	72.6% non-graduates	Reached
Non-graduates: Credit deficiency status and arrival grade upon enrollment	Calculation; Consistency with other calculations	Matched estimates	Reached
Credit deficient non-graduates: Prior school district	Calculation; Consistency with other calculations	Matched estimates	Reached
Non-graduate who enrolled for a 5th year	Calculation; Consistency with other calculations	Matched estimates	Reached
Cohort: Average length of enrollment	Calculation; Consistency with other calculations	< 1.5 years	Reached
Cohort: Students arriving in their 11th or 12th grade year one semester or more behind that were economically disadvantaged	Calculation; Consistency with other calculations	Matched estimates	Reached

*Note.* <sup>1</sup>Definitions provided specific conditions are calculating some estimates, for more information on definitions please see Appendix. \*Background Information assessed a sample of 915 students and included 105 variables pertaining to demographic information, credit deficiency, enrollment, and graduates versus non-graduates. ACGR=Adjusted Cohort Graduation Rate.

After reviewing the data files, there was no indication of misrepresented data pertaining to errors in data entry. Calculations presented in Table 1 did not demonstrate any issues through replication. In assessing the evaluator to NCA data results, the calculation outcomes consistently matched.

### **Inferences under Evaluation**

There is almost exact phrasing of the inferences provided below compared to inferences reported in the 2016 data validation report. NCA data-driven statements (the structure of the sentence is the same or nearly the same and the only difference are the numerical values):

- 2015 Graduation rate calculations
  - “2015 grad rate applying Nevada state law (42.8%)”
  - “2015 grad rate applying Nevada state law + not classifying 5th year as non-graduates (45.4%)”
  - “2015 federal ACGR + not classifying students enrolling one semester or more behind as non-graduates (57.2%)”
  - “2015 grad rate for students enrolled at NCA for all four years of high school (83.8%)”
- “2015 Cohort: Credit deficiency status upon enrollment at NCA & economically disadvantaged category composition:”
  - “49.7% of students in the 2015 cohort enrolled on track at NCA”
    - “Of those students in the 2015 cohort enrolling on track, 51.8% were economically disadvantaged students.”
  - “50.3% of students in the 2015 cohort were credit deficient when they enrolled at NCA.”
    - “Of those students in the 2015 cohort enrolling credit deficient, 69.0% were economically disadvantaged students.”
      - “Of those students arriving slightly credit deficient (less than 2.5 credits behind), 56.8% were economically disadvantaged students.”
      - “Of those students arriving at least one semester behind, but less than a year behind (at least 2.5 credits behind, but less than 5 credits behind), 71.1% were economically disadvantaged students.”
      - “Of those students arriving at least one year behind (5 or more credits), 73.3% were economically disadvantaged students.”
  - “60.5% of the entire cohort were economically disadvantaged students.”
- “2015 Non-graduates: Credit deficiency status upon enrollment at NCA:”
  - “72.6% of the non-graduates in the 2015 cohort enrolled at NCA credit deficient.”
- “2015 Non-graduates: Credit deficiency status and arrival grade upon enrollment at NCA:”
  - “81.4% of credit deficient 2015 non-graduates arrived at NCA in their 11th or 12th grade year (127 students):”
    - “1.9% (3) arrived in 9th grade”
    - “16.7% (26) arrived in 10th grade”
    - “35.3% (55) arrived in 11th grade”

- “46.2% (72) arrived in 12th grade”
- “21.2% of the 2015 non-graduates arrived in their 11th or 12th grade year at least one semester or more behind ( $\geq 2.5$  credits).”
  - “87.9% of those students were economically disadvantaged students.”
- “80.8% of credit deficient 2015 non-graduates arrived one semester or more credit deficient (126).”
  - “19.2 arrived a few credits behind ( $< 2.5$ );”
  - “25.6% arrived one semester behind ( $\geq 2.5, < 5$ ); and”
  - “55.1% arrived one year behind ( $\geq 5$ ).”
- “2015 Credit deficient non-graduates: Prior school district”
  - “Clark County, 53.8%”
  - “Washoe County, 14.1%”
  - “Nevada Public School Districts (other than Clark and Washoe Counties), 9.6%”
  - “Charter Schools, 7.1%”
  - “Out of State, 11.5%”
  - “Other (Home, Private, Unknown, 3.8%”
- “2015 Non-graduates who enrolled at NCA for a 5th year”
  - “43.9% were successful in graduating from NCA or continuing their education at the school (graduated 5th or 6th year or still enrolled 6th year).”
  - “36.8% of these students graduated from NCA in their 5th year.”
  - “38.6% of these students graduated from NCA in their 5th or 6th year.”
  - “5.3% are still enrolled at the school (as of April 2017). Note: These are students still enrolled for a 6th year and are potential graduates.”
- “2015 Cohort: Average length of enrollment at NCA”
  - “The average length of enrollment for students in the 2015 cohort is slightly less than 1.5 years.”
- “2015 Cohort: Percentage of students arriving in their 11th or 12th grade year one semester or more behind that were economically disadvantaged”
  - “Of all students in the 2015 cohort arriving in their 11th or 12th grade year at least one semester or more behind, 73.0% of [*sic*] were economically disadvantaged students.”
  - “Of all students in the 2015 cohort arriving in 11th grade, at least one semester behind, but less than one year behind, 75.0% were economically disadvantaged students.”
  - “Of all students in the 2015 cohort arriving in 11th grade, at least one year behind, 87.9% were economically disadvantaged students.”

- “Of all students in the 2015 cohort arriving in 12th grade, at least one semester behind, but less than one year behind, 64.0% were economically disadvantaged students.”
- “Of all students in the 2015 cohort arriving in 12th grade, at least one year behind, 65.9% were economically disadvantaged students.”

The data aspect of each inference (or data-driven statement) were already assessed by the evaluator in Table 1 and were found to be reproducible. The meaning of each calculation and how it was tied to form a data-driven statement did warrant the making of such statements by NCA. I (Tiberio Garza) did not find any fault with statements made by NCA and recognized the data and information pattern used by NCA in conveying results. Such patterns can be used to assess future data results from NCA.

### **Comparing 2016 and 2015 Data Calculations and Inferences**

NCA did make comparisons and averages between 2015 and 2016 data. What follows are NCA’s statements in quotations and Table 2 illustrating comparison values. The averaging conducted by NCA was reproducible and merely illustrates another aspect of credit deficiency. Statements made here are descriptive and not over-reaching.

“Average arrival grade and average credit deficiency for non-graduates in the 2015 and 2016 cohorts who enrolled credit deficient:”

- “83% of the non-graduates in the 2015 & 2016 cohorts who enrolled credit deficient arrived at NCA during their 11th or 12th grade years.”
- “81% of the non-graduates in the 2015 & 2016 cohorts who enrolled credit deficient arrived at NCA one semester or more behind in credits (at least 2.5 credits or 5 courses behind).”
  - “43% of these students enrolled in their 12th grade year.”

Table 2 shows differences between 2015 and 2016 data that were reproducible by the evaluator. The table was also re-created from an existing table NCA produced to represent 2015 and 2016 differences. For this supplemental the table was re-created and data was replicated to reproduce Table 2.

**Table 2. Reproduced table from NCA Data**

<b>Categorization of Cohorts</b>	<b>2015 Cohort</b>	<b>2016 Cohort</b>
Advanced diploma in 4 or less years	4	3
Standard diploma in 4 or less years	115	173
Adjusted diploma in 4 years	3	3
Diploma in 5th year (“For 2016 includes those on-target to graduate at end of year”)	21	28
Diploma in 6th year (“Still enrolled students may end up adding to this total”)	1	NA
Still enrolled at NCA (“For 2016 cohort does not include those on-target to graduate at end of year”)	3	7
Post-secondary enrollment (“without record of formal high school completion, could include adult education and/or HSE completers”)	24	13
Withdrew to adult education	19	22
HSE completers with 5 years (“Does not include students enrolling in adult education”)	18	25
Other non-graduates/drop-outs	143	171

*Note.* HSE=High School Equivalency, NA=not applicable.

The values in Table 2 did not depart from the data and indicated validity and reliability. The process involved ensuring the count was correct. Also, the count was depended on how NCA defined categories of cohorts, which were considered reasonable.

### **Conclusion (Concerns and Takeaways)**

The intent of the supplemental was to merely valid NCA results through replication and evaluate inferences for any over-reaching implications not warranted by the data. Concerns were not identified while conducting this work. What diminished the evaluator’s concerns was consistency in data products, logical structure within data products, and formulation of statements and calculations across the two years. Thus, the 2015 data presented here and the comparison/averaging between 2015 and 2016 data provided by NCA demonstrates that NCA conducted responsible and ethically justified work pertaining to the data. The statements and calculations made by NCA with support from the data are valid, reliable, and trustworthy.