

# EXPLORE ACADEMY

## Executive Summary

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Explore Academy will bring a revolutionary educational system to the Albuquerque area, one which focuses on strong core education and college readiness through the philosophy of academic choice. The innovation of Explore Academy is based on the premise that individuals best succeed when they are internally motivated through the power of personal choice, and that by offering students a customized educational system where they can create their own pathway, all students will show greater levels of success.

To this end, all students at Explore Academy will have the ability to choose in what manner, or through what approach, they will learn each academic standard required by the State of New Mexico, thus creating an individualized curriculum as never seen before. No other school, private, public, or charter, offers this degree of academic customization with a focus on the individual student.

Most students in the Albuquerque area attend the district's public high schools or district-authorized charter schools, with a smaller, but increasing portion enrolled in state-authorized charter schools or local area private schools.

The high school student population for the Albuquerque area shows the following demographic metrics (APS, 2011):

- 52.8% Hispanic
- 9.3% English language learners
- 36.7% qualifying for free/reduced lunch programs
- 13.1% special education (non-gifted)

The following represent the district's academic statistics for high school students (PED, 2012):

- 64.7% graduation rate
- 50.8% proficient and above in reading (based on 11<sup>th</sup> grade data)
- 41.2% proficient and above in math (based on 11<sup>th</sup> grade data)

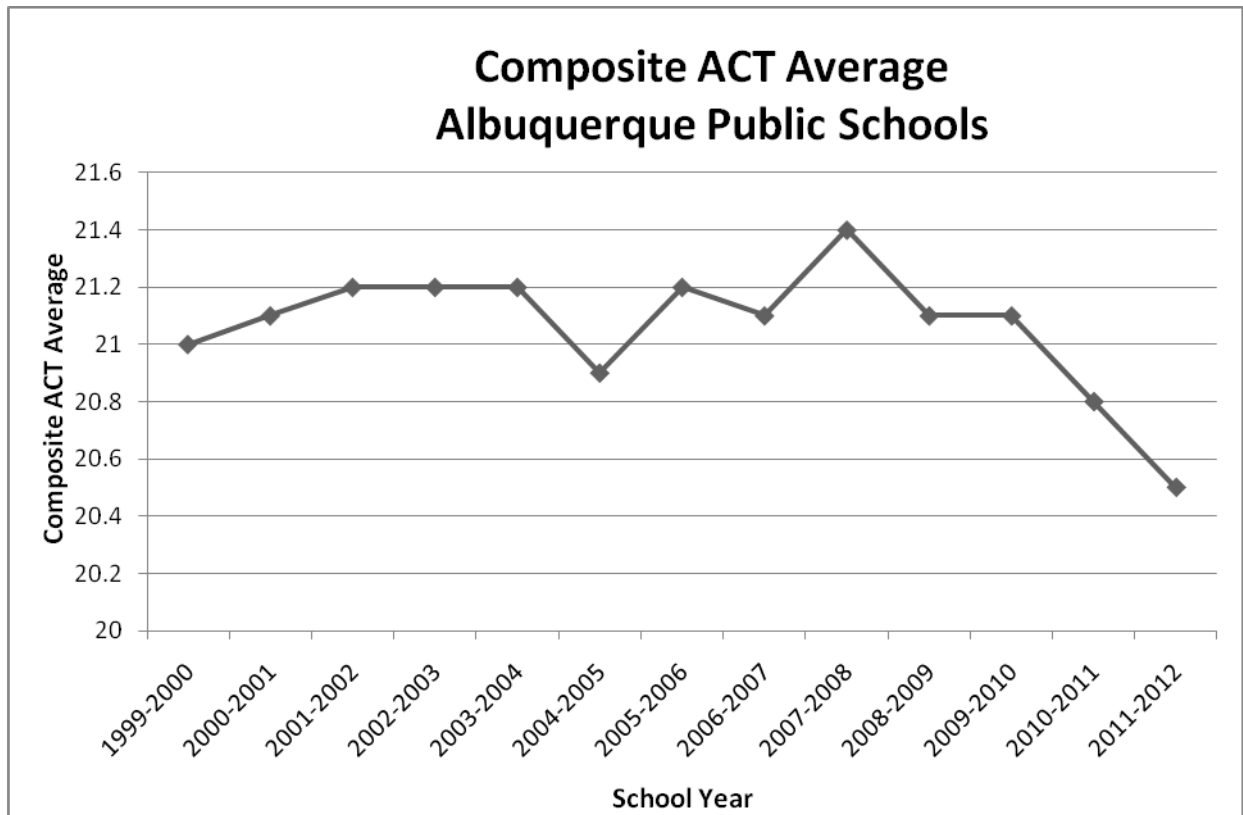
The inclusion of Explore Academy as an option for students and parents will provide the district with much needed educational value. Because Explore Academy students will be assessed more specifically in their academic proficiency, they will no longer afford the leniency of passing courses for which they are not fully proficient.

The system in place at the high schools in the Albuquerque area operate on the traditional semester schedule and thus provide a low level of specific academic accountability, the cumulative effects of which compound to produce the low reading and mathematics proficiencies as described above. Explore Academy's system departs from the traditional semester structure and will thus demand greater accountability for each of its students leading to significantly higher levels of academic performance in compared to their peers within the greater school district.

In the area of college preparation, the local Albuquerque school district has shown declining success in college readiness, and it is in this area that Explore Academy will benefit the local population of students by offering an improved and more effective academic model for college preparation.

Over the last decade, as graduation rates within the district have slowly risen, ACT scores of graduating seniors have begun to decline. While ACT represents one metric, it is both an established and standardized college entrance assessment, administered to the majority of students in the Albuquerque area who pursue college entrance, and as such it can be used to gauge the level of success in college preparation for a school or district.

The graph below shows the district's ACT data over the last decade, as released by Albuquerque Public Schools.



Aside from the obvious recent downward trend, data analysis reveals more telling information. For the first eleven graduating classes shown above, the mean ACT composite score was 21.1 with a standard deviation of 0.1. During this time, the average composite ACT scores held steady in a range of 21 to 21.2, staying within the standard deviation (+/- 0.1) and thus showing no change of statistical significance.

In the last two years, however, the change has been significant. In 2011, the district's average ACT score dropped to 20.8, *three standard deviations* below the average of the previous decade; this trend continued in 2012 with the average mark dropping to 20.5, *seven standard deviations* below the previously established average. This statistical significance of this decline is concerning.

Disaggregating the data shows a more telling trend, however. Of the twelve (12) major high schools in APS, only three have ACT scores higher than the national average (21.1): Eldorado, La Cueva, and Sandia High Schools. These three schools house 30% of the district's high school student

population, yet disproportionately represent almost 40% of its ACT test takers. They are also the only three schools in the district in which more than 75% of students take a college entrance exam.

When one removes these three schools from the district's ACT data, the district's composite average drops one full point (20.3 to 19.3), falling below the state average (19.8). Among these remaining nine schools, none beat the national average and only three (Volcano Vista, Cibola, and Albuquerque High) beat the state's average. Thus, it can be concluded that the district's ACT composite average, which beats the state ACT composite average, can be largely attributed to three schools, representing a lack of comprehensive focus on the district's part in preparing its students for college. Thus, in the area of college preparation, the area of town in which the student resides, and thus the high school in which they are assigned through the district's boundaries, is a primary factor in the effectiveness of the college preparation he or she will receive.

For the nine remaining schools, and the 70% of the district's student population they manage, there is significant deficiency in preparation for college. As a result, to offer students from across the district an avenue in preparation for college, APS has created Schools of Choice, the most prominent of which include the Career Enrichment Center (CEC) and Early College Academy (ECA).

The Career Enrichment Center offers students significant program offerings which assist in their preparation for college, but, as a magnet school, it is not equipped to handle college preparation for the entire district. Furthermore, its enrollment is selective; according to district registration guides, students who desire enrollment must apply and are selected based on their grades, resume, references, and field experience, marking the school as geared for only the strongest of students.

The Early College Academy, a second addition to the district's college preparatory collection, represents a bridge to college academics. It offers students a chance to take college classes, on college campuses, while still in high school. As such, it offers very little in the way of college preparation in that it simply provides those college-ready students the opportunity to earn college credit while still in high school.

Clearly there exists a need for students in the Albuquerque area to prepare for college, one which integrates college preparation as part of the curriculum rather than as a separate curricular component. Explore Academy's academic model offers such a program with college preparation integrated throughout each student's four-year tenure. Furthermore, as it will exist as a charter school, it will be available to any student throughout the district, no matter what geographical area of town they reside.

While the Albuquerque area does offer *parents* significant choice *between* schools, there is very little difference in choices offered to *students within schools*. Most schools, regardless of their type (public, public charter, or private), offer very little difference in course offerings, specifically in those fulfilling core academic requirements, which represent roughly 70% of the courses in which a student enrolls in their high school career. This commonality can be seen in two dimensions: between schools and within each school.

*Between schools*, for the vast majority of schools that exist in the area, the tracks in the four core academic areas are similar if not identical. This similarity is partially due to the common academic standards to which each school must adhere, as dictated by the State, however, there is very little difference in how schools *approach the completion of those standards*. The four academic tracks are shown below:

<b>Science</b>	<b>Math</b>	<b>English</b>	<b>Social Studies</b>
Biology Chemistry Physics	Algebra Geometry Algebra II Pre-Calculus/Trig.	English 9 English 10 English 11 English 12	New Mexico History World History US History Government/Econ.

While it is recognized that there is differentiation in how classes are structured between different schools, the point of emphasis is that there is very little variation in the common academic tracks students will experience between schools.

*Within a school*, there is very little diversity in what courses students have the option to take, specifically within the academic tracks mentioned above. In other words, between two students at the same school, there is very little uniqueness in the core academic educational experience for each student.

The chart below shows the levels of course diversity offered to students at a typical high school in the Albuquerque area (La Cueva High School). Each area is divided by grade or topic with the included number of potential options students have in fulfilling each academic requirement shown. The final column shows the level of individualized pathways offered, calculated based on the number of options at each level.

## LA CUEVA HIGH SCHOOL COURSE OFFERINGS FOR CORE ACADEMIC AREAS

ENGLISH	9 <sup>th</sup> Grade (2)	10 <sup>th</sup> Grade (3)	11 <sup>th</sup> Grade (3)	12 <sup>th</sup> Grade (6)	Curricular Pathways
4 credits required for graduation	English 9 English 9 – Honors	English 10 English 10 – Honors World Humanities	English 11 AP English 11 American Humanities	English 12 AP English 12 Mythology/Folklore Bible Literature Shakespeare Film Criticism	108 Curricular Pathways (Calculated based on the options at each level: 2 x 3 x 3 x 6)

MATH	Algebra (3)	Geometry (2)	Algebra II (3)	Elective (6)	Curricular Pathways
4 credits required for graduation	Algebra Honors Algebra Algebra (Upperclass)	Geometry Honors Geometry	Algebra II Honors Algebra II Algebraic Models	Transitions College Math Financial Literacy Pre-Calculus AP Calculus AB AP Calculus BC AP Statistics	108 Curricular Pathways

SCIENCE	Life Science (3)	Chem Science (3)	Phys Science (5)		Curricular Pathways
3 credits required for graduation	Biology Biology – Bilingual AP Biology	Chemistry Chemistry – Bilingual Geology AP Chemistry	Physics I Physics I – Bilingual AP Physics B AP Physics C Geology/Astronomy		45 Curricular Pathways

HISTORY	9 <sup>th</sup> Grade (1)	10 <sup>th</sup> Grade (3)	11 <sup>th</sup> Grade (3)	12 <sup>th</sup> Grade (1)	Curricular Pathways
3.5 credits required for graduation	NM History (0.5 cr)	World History and Geography AP World History and Geography World History and Geo Humanities	US History and Geography AP US History and Geography US History and Geo Humanities	Gov't/Economics	9 Curricular Pathways

Based on the chart above, the school offers very little in course diversity from which students can choose in fulfilling their core credit requirements. Most course diversity, where it exists, is based on course rigor (regular vs. honors vs. AP) with very little differentiation in place to address student interest. Only in certain areas, such as in the 12<sup>th</sup> grade English course offerings, does the school offer differentiation (Bible Literature, Shakespeare, etc.) in fulfilling core requirements, yet such offerings are limited.

In the area of English alone, compared to the offerings at Explore Academy, La Cueva High School has a fraction (less than 0.000003%) of the curricular pathways and thus pales in comparison in the academic diversity it can offer its students (see application for explanation and calculations on curricular diversity).

This school and its curriculum is a representative sample of the limited diversity seen across the educational landscape in the Albuquerque area. Regardless of the type of school, charter vs. traditional public high school, *there is very little diversity in how students fulfill the requirements set forth by the state*. As a result, the core curricular tracks offered by schools across the city are fixed and consistent when comparing school to school.

This is where Explore Academy fills a vital need of Albuquerque community, for it provides a new approach in education, separating itself from the curricular models found at most schools in the area. It provides students with choices in *every* course in which they enroll, allowing them to chart their own educational path and pursue their interests.

Students who enroll will have a choice in every course they take, which will immediately provide them with advantages in learning, as they will learn *how* they want. Through a diverse set of themes through which each course will be offered, students will have the ability to choose the theme in which they are most interested. This makes education customizable to a level not seen in the Albuquerque area in educational institutions both public and private. Because not all students learn in the same manner, this form of differentiated instruction will allow for significantly higher levels of student success compared to the area's local school which operate through the traditional and outdated one-size-fits-all educational model. *An educational system offering increased student choice and a customized form of education is in the best interest of the student population.*

Class lengths will be trimmed to 4.5 weeks from the common 18-week/36-week semester format, with traditional courses divided into their constituent units and each unit becoming its own class. At the conclusion of each 4.5 week course students will take an exit exam to gain credit for that given academic unit. This format of assessment will, for the first time, make students accountable for learning in every individual academic area, and will thus result in better education, including adjustments in instruction, remediation, tutoring, etc. *An educational system offering more specific instructional accountability is in the best interest of the student population.*

Students at Explore Academy will further choose from a variety of majors (comparable to those seen at the college level) and will spend a portion of their time beginning in their sophomore year

exploring one or more career pathways that will not only expose them to the demands of a given college major/career, but will provide them with a jumpstart in preparation for courses they will see in college. No school in the Albuquerque area, public or private, offers the diversity of specialized pathways of instruction to prepare students for success in college. *An educational system which allows students to explore areas in which they are interested is in the best interest of the student population.*

Justin Baiardo, the Explore Academy founder, is a National Board Certified teacher in both the Albuquerque and Rio Rancho public school districts, with experienced instruction in general education, special education, and ELL. During his time in education, Mr. Baiardo has gained significant experience in the creation and implementation of diverse forms of education, including general education, special education and college preparatory curricula.

Mr. Baiardo is a strong proponent of differentiated instruction and has been responsible for extensive levels of curriculum development that have successfully incorporated diverse methods of instruction for students from all backgrounds, specifically those who are college-bound. This experience has lead him to propose the Explore Academy charter, whose vision of a differentiated curriculum separates itself from any educational philosophy seen within the state.

Explore Academy's Governance Council consists of five members.

Mary Robinson is a master teacher who has positively affected the lives of each of the thousands of students that have passed through her door over the years. Although a scientist by trade, she has come to find her place in the teaching of young men and women, preparing them for both college and career with her advanced academic programs. As one of the few founding staff members of Rio Rancho High School, an institution known for its diverse collection of elective courses, she has built one of the most successful professional college and career preparatory program in the state, if not the country.

Over the past thirteen years, Barbara Lopez has worked as a part-time research engineer at the University of New Mexico. In that time, she has worked in association with the National Science Foundation for Advanced Technological Education, including both curriculum development and instructional design for STEM education, with a focus on MicroElectroMechanical Systems (MEMS).



Her curriculum development experience ranges from middle school through college level. She has also developed educational materials for technicians and engineers working in the semi-conductor industry.

Before her work at UNM, she worked at Intel Rio Rancho as a capacity engineer. She began her career at NASA, Johnson Space Center, working as an acoustic/vibration test engineer for space station payloads.

Jeanette Miller offers her expertise from a variety of backgrounds including business, education, and community outreach. As a former School to Careers Coordinator at Rio Rancho High School, she has extensive experience in the educational transition from high school to college. As a former Inquiry Facilitator for the Intel International Science and Engineering Fair, she has worked extensively with young men and women in developing themselves as professionals in the areas of science and engineering.

Lately, however, her expertise has brought her to the business world, working as the Director of Marketing and Public Relations for the National Museum of Nuclear Science and History. Her diversity and wealth of experience is only equaled by her passion for education and the fostering of young men and women into successful adults.

A special educator for the past thirteen years, Nadyne Shimada recently vacated the position of Academic Dean at the Public Academy for Performing Arts. As the Academic Dean, Nadyne was responsible for managing the student information system, development of the master schedule, student course registration, developing and maintaining relationships with educational providers of enrichment, credit recovery and remedial courses, standardized testing, college counseling (including writing letters of recommendation and completing secondary school reports), and ensuring each student was on track for graduation. Nadyne also managed a special education, 504, and SAT case load, and provided remediation, direct instruction, coaching, counseling, and transition services to secondary special education students. While at PAPA, she also taught a variety of courses from Advanced Placement and dual credit CNM classes to middle school math remediation.

Prior to her tenure at PAPA, Nadyne managed the gifted program at Rio Rancho High School for ten years. Her responsibilities included developing and delivering required and elective courses for gifted students, providing college counseling services (including writing letters of recommendation and secondary school reports), and mentoring students through science competitions. Nadyne also served

on the RRHS Positive Behavioral Support team, Institutional Review Board, and was the faculty sponsor for the National Honor Society.

Prior to her career in education, Nadyne was a Managing Consultant for an employee benefits consulting company where she specialized in large group health and welfare benefits. She spent sixteen years in human resources consulting and management of compensation and benefits.

Jesse Pickard is the founder and CEO of Apic Solutions, Inc, a corporation designing specialized technological systems for New Mexico business entities. In addition to providing his services to business across the state, Jesse has worked with dozens of schools across New Mexico to help upgrade their electrical and technological infrastructure. He is an active member of his community, involved in several non-profit foundations, and has worked for several years as a member of the financial review committees for the State of New Mexico Public Education Department in its analysis of charter school applications.

As the CEO of his own small business, he has a background in business, finance, and accounting, and will bring this expertise to the school's Governance Council as its financial expert.