



Education at the speed of each student

School Growth Through Strategic Investment – A Case History

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Introduction

This case history demonstrates the relationship between educational quality and institutional sustainability, with significant positive outcomes through strategic investment in student admissions and retention and the proper strategic use of technology resources.

The case is drawn from my experiences as Head of School of an independent school in the greater Philadelphia area (referred to as “The School”) between 2010 and 2014.

The Goal

To improve the quality of education, retention and recruitment at The School through increased academic differentiation and learning support, greater emphasis on competitive college admissions and broadening the market of potential students.

Synopsis

The challenges of a competitive environment, classroom differentiation, Learning Support staff and a weak extra-curricular program produced clear gaps in educational achievement and had a significant impact on admissions and retention.

Following a strategic relocation, The School made no-cost adjustments to enhance the program as well as numerous strategic investments to improve educational quality, admissions and retention, all of which produced line-item surpluses within two years.

Over a four-year period enrollment school-wide increased by 50%, acceptances to the most competitive universities dramatically improved, and the admissions and development departments were professionalized and showed improved yields.

This case study describes the context, programmatic changes and investments that The School made. It includes relevant statistics and charts, and a link to a simple spreadsheet customizable for any school to model potential investments in their program.

About The School

Introductory Note

While this case history studies a private Jewish school, all of the strategies employed are equally relevant to all independent schools.

Mission

The School was formed by parents living in the greater Delaware Valley seeking a modern Orthodox college-preparatory high school option for their children.¹

Oversight

The School was founded by laypersons, and although there is a rabbinic advisory board it has no legal or practical oversight of the school. However, many of the founders and current board members are graduates of leading independent Jewish schools or have significant Jewish background. The Education Committee is a Board of Trustees subcommittee that provides feedback and advisory input.

Demographics

The Delaware Valley Jewish communities have a very limited supply of families who might be drawn to the specific mission of the school.² From the outset sustainability was a major question, and in its first 10 years the school struggled to average 25 students per grade.

The educational quality and financial capacity of the feeder communities varies widely. With many students drawn from relatively economically disadvantaged communities the number of families capable of paying full tuition - which does not cover true cost - are few, and the need for differentiation i.e. differentiated instruction, more homogeneous sections and AP-level courses, is great.

The Competitive Environment

At the time of the schools' founding there were four prevalent options for families who wanted a Jewish high school education: very highly-ranked public schools in two of the four feeder communities, supplemented by additional Judaic enrichment outside of school time; two highly-respected separate-gender boarding schools in New York³; a non-denominational Jewish school in Philadelphia⁴; and an ultra-Orthodox girls high school in Philadelphia.

Educational Quality

Given both its mission and the challenge of sustainability, in its early years The School needed to be as academically inclusive as possible. Over time a minimum standard score on ISEEs or ERBs was required, with

¹ The Schools' Mission Statement (with minor edits): The School is a Torah-based, college preparatory school offering equal opportunity for young men and women to obtain the highest quality Judaic and General Studies education. Our students mature in a healthy and supportive environment that fosters scholarship and intellectual curiosity, love of learning, and a commitment to Halachic (normative traditional) Judaism.

² The question of whether to define the target families' Judaic affiliation in broader or narrower terms remains a significant tension in the lay oversight of the school.

³ At any given time there were no more than eight students attending these schools that would otherwise have attended the school. However these students were overwhelmingly from a high tuition neighborhood and academically very capable.

⁴ In the 2010-2011 school year the percentage of students attending this school from the main Orthodox synagogue in the high tuition neighborhood was 50%

students scoring below the minimum required to obtain a psycho-educational evaluation to allow the school to determine whether it could support the students' needs.

Data-driven analysis of educational quality rests in the relationship between scores from standardized admissions testing and subsequent achievement on high school-level standardized testing (PSATs, SATs, APs). A strong subjective measure would be acceptance to competitive universities.

Any measure of the educational quality of the Judaic program is hampered by the lack of objective metrics. Subjective measures include skill acquisition, acceptance to and participation in elective Jewish programming, the level of traditional observance, and the level of Jewish identification and participation on the college campus.

Sustainability

With actual cost 40% greater than the amount of tuition collected, The School has always been heavily reliant upon a major donor. This was initially the responsibility of the founding family and was transferred to a different family in the second half of the last decade, and more recently has been transferred to a local foundation supported by a single family. The need to widen the list of major donors is an ongoing concern, both for sustainability and for appropriate governance.

While a full treatment of the school sustainability would also involve a discussion of its development department and back office, for the purpose of this case history we will focus only on the role of admissions.

The Facility

For the first three years, the school was housed in the basement of the local Jewish Community Center. It then moved to a converted synagogue facility. Both of these facilities were located in Northeast Philadelphia, which meant a challenging commute for families from the Lower Merion area. The move in 2010 to a facility in the Lower Merion area positively impacted both the educational facilities and the tuition potential of The School without disenfranchising the other communities⁶.

The Challenge

AP and SATII scores were not aligned with expected growth from standardized admission scores and PSATs. Along with the shortfall in student accomplishment this dynamic negatively impacted college admissions, and thus student recruitment and retention, at both ends of the academics spectrum.

All smaller schools struggle to provide the full range of academic, co-curricular and extracurricular activities⁷. At the same time, families drawn to independent schools expect their children to be fully competitive for acceptance into the finest universities. The challenge of available time affects both educational quality and admissions. As always, pressures create a drive for innovation.

The Results

Through strategic use of resources, restructuring of the school day and strategic investment, the school showed impressive gains in admissions⁸, retention⁹ and educational quality¹⁰.

⁶ See Appendix, chart 1, depicting the intersection of commute times and financial capacity

⁷ This is particularly true of a dual-curriculum school, whether the added curricular areas are religious, artistic or athletic. The dual curriculum adds cost and thus forces curricular choices around differentiation and access that most schools do not face.

⁸ 2009-10 – 95 students; 2010-11 – 114; 2011-12 – 129; 2012-13 – 139; 2013-14 - 148

⁹ For the 2012-13 school year attrition had dropped to below 2%

¹⁰ The class of 2014 had a 100% graduation rate and the school's first-ever acceptances to Harvard, Yale and Princeton

Solution 1 – Increased Educational Quality Through Differentiation

What Was Being Done

Combined Grade-Level Classes

For some subjects grades were combined to allow for two different level classes at the same cost. For example, previous to 2010 both ninth and 10th grade would take biology in “Year A” and chemistry in “Year B”. This allowed for a regular and honors level class for each subject.

The drawbacks of combining grade levels include challenging scheduling constraints; ninth-grade students may lack the pre-requisite knowledge for what might otherwise be a course taken in a later grade; and the merging of grades within a classroom may increase the social challenge facing incoming ninth grade students in particular.

Differentiation Within A Single Section

This allowed students in the same section to be assessed differently, at standard, honors or AP credit. The drawback of this approach is the strain of differentiation at high school grade levels, with increasingly complex material and an ever-widening range of academic proficiencies. With the established tendency to teach to the norm of the class students at the edges of the academic spectrum are disadvantaged - students in need of more support must maintain a pace set in part by advanced-level students, and advanced-level students left to learn much of the material on their own.

What Was Done Within Budget

The School directed the bulk of its Professional Development toward differentiation and the understanding of learning styles and special needs. Particular attention was paid to shaping a supportive school-wide attitude toward differentiation, and the use of technology tools¹¹ to assist with executive function.

The Investment

The previously described factors left the school with open seats in every grade. This was a blessing in disguise, an opportunity to invest in staffing and programs offset by the increase in admissions and retention yet without incurring significant step costs¹².

To explain: For the purposes of example we will assume that the average student tuition and fees yields \$12,500, which is therefore the value of every additional seat filled. This provides a financial constant for measuring the

¹¹ These included introduction of online portals for viewing of assignments and calendars, and individual online student calendars and notebooks. This initiative was greatly advanced by a one-to-one iPad program funded by a local foundation.

¹² From Investopedia <http://www.investopedia.com/terms/s/step-costs.asp>

DEFINITION OF STEP COSTS: Business expenses that are constant for a given level of activity, but increase or decrease once a threshold is crossed. Step costs are those costs that change when a business' production levels increase or decrease. (When depicted on a graph, these types of expenses will be represented by a stairstep pattern.) For example, a coffee shop might be able to serve 30 customers an hour with one employee. If the shop receives anywhere from zero to 30 customers per hour, it will only need to pay the cost of having one employee. If the shop begins receiving 31 or more customers per hour, it must hire a second employee, increasing its costs of doing business.”

It is fair to note that increase in students may require an increase in support staffing. Also, it is the business of cost accounting to determine the cost per unit of any budget item. The importance of the absence of step costs is that an increase in students almost always decreases the overall cost per unit.

investment in staffing and programs. If such an investment fills four empty seats, the direct ROI (Return On Investment ¹³) is \$50,000 in revenue less the cost of the change. Following, if a new AP course is expected to increase admissions or retention by a single student a year, and the added costs for staffing, professional development and fees is \$20,250, the year one investment of \$7,750 yields a \$4,750 surplus in year two, \$17,250 in year three and so on.

A table detailing all of the investments can be found in the Appendix, chart 2.

Note: Schools with a higher average return per student will recoup their investment that much more quickly¹⁴.

Note: There is a further indirect return from demonstrable growth in program, admissions and retention to potential families and donors.

Adding Differentiated Sections

With math already “leveled”, The School added a dedicated Honors section for each core subject in the ninth and tenth grades, an investment of .6 FTE or \$37,500. The needed offset to show a 1:1 ROI was three students per grade.

Widening AP Opportunities

Each additional AP class in eleventh or twelfth grades required an investment of .25 FTE or \$18,400 (including professional development and fees). The needed offset to show a 1:1 ROI was slightly more than 1.5 students per grade.

Learning Support

To widen the pool of potential students and improve student retention required an investment in a Learning Specialist at 1.0 FTE, \$60,000. The needed offset to show a 1:1 ROI was slightly less than five students school-wide.

Blended Learning for Foreign Language

To improve differentiation in foreign language Blended Learning classes were introduced utilizing the Rosetta Stone program. Students rotated between twice-a-week direct instruction and twice a week online instruction. This improved differentiation overall, and the reduced size of each individual section allowed for more effective direct instruction.

Each class section thus split would require an investment of .2 FTE for lab supervision¹⁵, at most \$10,000, plus \$150 per student licensing fees (\$3,000 for a split class of 20 students), for a total investment of \$13,000. The needed offset to show a 1:1 ROI was one student per grade.

¹³ ROI is a performance measure used to evaluate the efficiency of an investment or to compare the efficiency of a number of different investments. Return on investment is a very popular metric because of its versatility and simplicity. That is, if an investment does not have a positive ROI, or if there are other opportunities with a higher ROI, then the investment should be not be undertaken.

¹⁴ To assist in applying the formula to your school we have placed an Excel spreadsheet with locked formulas at the following Dropbox link: <https://www.dropbox.com/s/iei7ywo1sp4fu/investment%20chart.xlsx?dl=0>

¹⁵ At The School this cost was offset by contractually mandated teacher supervision time; however the example uses a lower-than-average cost of supervision, as the lab supervisor does not require subject expertise.

Solution 2 – Boost Admissions Through Program Changes

A - Adjust The Schedule

What Was Being Done

The school began at 8:05am and ended at 5:20pm. The added curricular requirements of a dual curriculum school results in a longer school day. Also, the high percentage of students commuting to The School necessitated a later start time than local public schools.

By comparison the other Jewish private school option, with a less intensive Judaic curriculum, had a shorter day, although for families living near The School the commute time to the other option lessened the actual difference to about 45 minutes.

The lateness of the school day impacted both extracurricular activities and private enrichment or tutoring. The late hour limited available practice time for sports and precluded a junior varsity program. Team members missed many classes for competitions with other schools on a more standard schedule. Finally, the late dismissal time was a deterrent for families whose children wanted enrichment activities in the arts or needed private academic enrichment or support.

Adjust The Schedule: What Was Done Within Budget

With students coming from a half-dozen feeder schools with widely varying levels of math preparation, and a dearth of qualified math teachers, math sections were being staggered by the splitting of lunch into two periods. By merging some math classes across grade levels – which improved differentiation as well - combined with some other minor adjustments, we were able to shorten the day by a total of seven periods per week.

The school day was shortened by 30 minutes. This allowed for better distribution of breaks in the day, and meant that students from the competing private Jewish school would now be more inclined to consider the school as the length of day for the respective schools was now almost the same.

B - Expand Co- and Extra-Curricular Activities

What Was Being Done

One class period each week was allotted toward co-curricular activities, the brevity of which impacted effectiveness, dissuaded participation, and left no room for a worthwhile arts program.

Expand Co- and Extra-Curricular Activities: What Was Done Within Budget

One of the instructional periods gained via adjusting the schedule was dedicated, along with the previously dedicated period and a lunch period, to an almost two-hour block for co-curricular activities¹⁶. This allowed the introduction of an AP Art program, a host of new clubs, a robotics program, intramural sports and an instrumental ensemble, as well as enhanced mock trial and model Congress programs, all delivered at little or no net cost to the school. It also allowed some families to provide privately funded arts enrichment during the school day.

¹⁶ The remaining two class periods gained by adjusting the schedule were divided between math, which had been meeting only four times a week, and Judaic Studies.

Solution 3 – Boost Admissions Through Improved Practices

The school historically left the admissions program to the Head of School, with a part-time support person. To create a best practices Admissions department the school expanded to a full-time director of admissions. This was an investment of .5 FTE or \$30,000. The needed offset to show a 1:1 ROI was 2.5 students school-wide.

Solution 4 – Boost Admissions and Retention Through Improved College Guidance and Acceptances **What Was Being Done**

Throughout its history the school provided a part-time college guidance counselor with limited training. Some families hired private college guidance counselors.

Other than University of Pennsylvania, which has a hometown bias, and Columbia University, students had not gained admittance to any of the other Ivy League schools or their equivalent. By contrast all other competing high schools had a strong track record of admission to a wide range of the best schools.

The limited college guidance program, a dearth of honors and AP options and limited time and availability for co-curricular an extra-curricular activities were significant deterrents for families considering The School whose goals included acceptance to highly competitive universities.

The Investment

Upgrading to a qualified full-time professional required an investment of .6 FTE, \$45,000. The needed offset to show a 1:1 ROI was four students school-wide (one admission or retention per grade).

The class of 2014 gained its first ever acceptances to Harvard, Yale and Princeton.

Other Access Solutions

Two other areas that were addressed:

Financial Access – Through a Commonwealth of Pennsylvania program, students from failing school districts who choose to attend private schools qualify for a tuition subvention of between \$1,500-\$7,500. One of the two largest feeder communities to the school was such a district. This tuition program allowed us to recruit and retain students from families who were unable to afford the minimum tuition set by the board.

Mission-Based Access – All classes in school assumed a minimum Judaic background. In order to attract motivated students and families with a more limited background we created the Bridge Program, a remedial program for grade 9 with an emphasis on Hebrew language. This prepared them to “mainstream” into our regular level Judaic studies classes for 10th grade and on. The cost of the program was offset by the addition of three students to the ninth grade.

Summary

Our mission is to provide the highest educational quality at reasonable cost. Costs, in particular FTE costs, continue to rise¹⁷, and we live always in the penumbra of cyclical economic downturns. Strategic investment and the careful optimizing of the balance between direct instruction and digital resources are powerful tools towards sustaining our outstanding schools.

¹⁷ For a full treatment of the subject please see the article “Supplementing and Enhancing the Face-To-Face Classroom ...” by Brad Rathberger, available on our website at www.BestSchoolsCG.com

Appendix

Chart 1 – The intersection of commute times and financial capacity

Community	% of Potential Students	Average Needs-Based Scholarship %	Round-Trip Commute to Old Facility	Round-Trip Commute to New Facility
A	20%	78%	<5 minutes	70
B	20%	32%	60	70
C	5%	57%	50	90
D	55%	18%	70	<10

Chart 2 – Summary of Investments

Investment Option	AP Class	Honors Sections	Learning Support	Foreign Language	Admissions	College Guidance
Target Grades	11 & 12	9 & 10	All Grades	9-11	All Grades	All Grades
FTE Needed	0.25	0.6	1	0.6	0.5	0.6
FTE Rate	\$75,000	\$60,000	\$60,000	\$50,000	\$60,000	\$75,000
Staff Cost	\$18,750	\$36,000	\$60,000	\$30,000	\$30,000	\$45,000
Additional Costs	\$1,500	\$0	\$0	\$3,000	\$0	\$0
Total	\$20,250	\$36,000	\$60,000	\$33,000	\$30,000	\$45,000
Revenue per student	\$12,500	\$12,500	\$12,500	\$12,500	\$12,500	\$12,500
additional students projected Year 1	1	2	4	2	1	2
students needed for 1:1 ROI (Return on Investment)	1.6	2.9	4.8	2.6	2.4	3.6
Year 1 line-item deficit	-\$7,750	-\$11,000	-\$10,000	-\$8,000	-\$17,500	-\$20,000
additional students projected Year 2	1	2	2	1	2	2
Year 2 line-item surplus	\$4,750	\$14,000	\$15,000	\$4,500	\$7,500	\$5,000