

Building Assets Reducing Risks: Academic Success for All Students Through Positive Relationships and Use of Real-Time Data

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### **Abstract**

Building Assets Reducing Risks (BARR) is a social emotional model that achieves academic outcomes through combining use of real-time student data with proven relationship-building strategies and intensive teacher collaboration to prevent course failure. BARR is a recipient of US Department of Education “Investing in Innovation (i3)” Development and Validation grants. This paper presents results of the first two years of BARR implementation, including a randomized controlled trial in the first year. Students who experienced BARR earned significantly more credits toward graduation and had a lower core course failure rate than students in the control condition. By the second year, the achievement gap between Hispanic and non-Hispanic students had closed. Implications of combining positive intentional relationships with academic rigor are discussed.

### **Objectives or purposes**

The Building Assets Reducing Risks (BARR) model is an innovative strategy to transform high schools. The model is a recipient of US Department of Education “Investing in Innovation (i3)” Development and Validation grants. BARR was developed at Saint Louis Park High School in Minnesota in 1998, and was implemented in a large, suburban high school in California with a randomized controlled trial (RCT) and in two small, rural high schools in Maine, where the design is longitudinal. In the next four years, it will be implemented in 12 high schools throughout the country using a RCT and disseminated to 45 additional schools.

Unlike many programs that target at-risk students, BARR increases student achievement for all first year (typically 9<sup>th</sup> grade) high school students by combining teachers’ real-time analysis of student data, student asset building, and intensive teacher collaboration to prevent course failure. BARR is unique in that it is a social emotional model that achieves academic outcomes but does not touch content curriculum and works within the existing school structure. It concentrates specifically on integrating student supports into a school’s existing model for addressing nonacademic barriers to learning. Schools often lack environmental resources conducive to learning, such as high levels of interpersonal support and safety. BARR provides a structure and process to teach, support and empower administrators, educators, parents and students around a common articulated pathway to student success. The BARR model provides training, resources, technical assistance, and a framework to create the necessary student supports.

This presentation will share the results of a Year One RCT that tested the effectiveness of the BARR program in a large suburban high school. Year Two findings are presented for the whole 9<sup>th</sup> grade class, as well as continuing gains for Hispanic students.

## **Perspective(s) or theoretical framework**

BARR is based on theory and research that demonstrates the connection between positive relationships and academic rigor, as well as the power of taking a strength-based approach to educational reform.

The Connection Between Positive Relationships and Academic Rigor. BARR is built on educational, resilience, and developmental research confirming that positive school climates, school connectedness, learning engagement, and positive relationships between students and staff—and among staff—are essential ingredients for turning around low performing schools. (Gordon 2006; National Research Council 2004; Cohen 2006; Jerald 2006; De La Ossa 2005). The degree to which students feel personally connected to their schools has been linked to attendance, performance, and graduation (Loukas et al., 2006; Wentzel 1999; Blum & Libbey 2004). However, positive relationships and a sense of community are not enough to produce achievement gains among students without a clear emphasis on academic excellence by school staff (Lee & Smith, 1999). Quality pedagogy, caring relationships, high expectations, and real-time access to student data are all critical in fostering a *positive school climate that promotes achievement*. These are the linchpins of BARR.

The Power of a Strengths-Based Approach to Educational Reform. A strengths-based approach is echoed in the resiliency research, which contends that every individual has resources that can be mobilized toward success in many areas of life (Anderson, 2010; Saleebey, 2001) and is characterized by “efforts to label what is right” within people and organizations (Buckingham, 2007, p. 6). It explores ways to empower individuals to flourish rather than simply survive (Liesveld & Miller, 2005). BARR is unique in that it embraces 40 Developmental Assets as the foundation of school turnaround efforts, challenging teachers to focus on and encourage the strengths of their students. Research supports the power of intentional developmental asset building within a school to boost academic achievement (Scales & Roehlkepartain, 2003).

## **Methods, techniques, or modes of inquiry**

In School Year 2011-2012, we conducted a randomized, controlled trial in a large, suburban school in California. All 9<sup>th</sup> grade students were randomly assigned to either treatment or control conditions. The control condition was business as usual, while the treatment condition implemented BARR. The following year, BARR was implemented in the entire 9<sup>th</sup> grade class. The following eight strategies form the basis of the BARR program.

**Strategy 1: Relationship-Building Professional Development for Teachers, Counselors and Administrators.** This consisted of a two-day training institute prior to the school year and continued with daily, weekly and monthly team meetings and in-situation coaching. **Strategy 2: Restructuring the High School Course Schedule.** Teachers were formed into “blocks or teams” and given a common preparation period in which they met to monitor student progress.

All 9<sup>th</sup> grade students were assigned to teacher blocks. Students in each block shared a common group of teachers in three core classes (English, Math, Science and/or Social Studies). **Strategy 3: Contextual Support (Focus on Leadership).** Through professional learning community meetings, administrators gained perspective on their leadership style and affirmed and expanded their actions in support of change. **Strategy 4: Parent Involvement to Support High School Reform.** Parental involvement was fostered through a 9<sup>th</sup> grade parent orientation conducted in the summer, followed by an invitation to join a parent advisory committee. Parents were included in quarterly asset reviews of their student’s progress. **Strategy 5: Whole Student Emphasis in Instructional Reform.** As teachers worked collaboratively through the block meeting process and delivery of I-Time, they developed an understanding of how to work with the whole student. **Strategy 6: Developmental Assets Curriculum (I-Time).** 9<sup>th</sup> grade students received, from their block teachers, a 30-minute lesson each week from the strength-based, relationship-focused I-Time Curriculum. I-Time focuses on social competencies to develop student-to-student and teacher-to-student relationships and is aligned with the National Common Core Standards. **Strategy 7: Block Meetings, Collaborative Problem Solving.** Teacher and support staff meet weekly to discuss the progress of all students. Remediation and acceleration needs are identified. Student strengths are always taken into consideration. **Strategy 8: Risk Review for Persistently Failing Students.** Risk Review is a weekly team meeting in which school staff discusses ways to help students to overcome the barriers to their academic success and leverage school and community resources to help persistently failing students.

**Data sources, evidence, objects, or materials**

The major data sources were credits earned and failure rate in the core subjects of English, Mathematics, and Science at the end of 9th grade in 2011-12 and 2012-13. Demographic data was collected on student gender and race. Implementation fidelity, collected in the fall and spring, is not reported in this presentation.

**Results and /or substantiated conclusions or warrants for arguments/point of view**

In 2011-2012, a suburban high school in California implemented a randomized controlled trial of the BARR model. The major evaluation question was: *Did students who experienced the BARR model earn more credits in core courses than students who did not receive the BARR model?* Tables 1, 2, and 3 present the results.

Table 1. Core Course Credits Earned by Group						
Group	Number of students	Average number of credits earned	Number of failed core classes	Number of students with at least one failure in a core course	Percent of students with at least one failure in a core course	Average GPA in core courses
BARR	272	5.65	90	57	21.0%	2.91
Control	276	5.26	181	88	31.9%	2.67
<b>Total</b>	<b>548</b>		<b>271</b>	<b>145</b>		

<b>Group</b>	<b>Gender</b>	<b>Number of students</b>	<b>Average number of credits earned</b>	<b>Number of failed core courses</b>	<b>Number of students with at least one failure in a core course</b>	<b>Percent of students with at least one failure in a core course</b>	<b>Average GPA in core courses</b>
<b>BARR</b>	Girls	148	5.68	43	29	19.6%	3.00
	Boys	124	5.62	47	28	22.6%	2.80
<b>Control</b>	Girls	148	5.40	79	39	26.4%	2.82
	Boys	128	5.11	103	49	38.3%	2.51

<b>Group</b>	<b>Ethnicity</b>	<b>Number of students</b>	<b>Average number of credits earned</b>	<b>Number of failed core courses</b>	<b>Number of students with at least one failure in a core course</b>	<b>Percent of students with at least one failure in a core course</b>	<b>Average GPA in core Courses</b>
<b>BARR</b>	Non-Hispanic	182	5.78	40	29	15.9%	3.00
	Hispanic	90	5.40	50	28	31.1%	2.73
<b>Control</b>	Non-Hispanic	163	5.37	92	41	25.2%	2.83
	Hispanic	113	5.11	90	47	41.6%	2.44

- Students in the BARR experimental group earned significantly more core course credits toward graduation and had a significantly higher average GPA than students in the control group. BARR experimental students failed half as many courses and had a lower student failure rate than did students in the control group.
- In terms of gender differences, boys and girls in the BARR experimental group progressed with credit earning at about the same rate and failed about the same number of courses. The only significant gender difference was in average GPA, where the control girls had a significantly higher average GPA than the control boys.
- The only ethnic sub-population with large enough sample size to study was Hispanic/non-Hispanic. Both Hispanic and non-Hispanic students in the BARR experimental group improved their credit earning over these subgroups in the control condition. In both study groups, Hispanic students earned slightly fewer graduation credits, had lower average GPA, higher core course failure rate, and a higher student failure rate than did non-Hispanic students.

In 2012-2013, the entire freshman class received the BARR model. The major evaluation question was: *Were the gains experienced in the first year of BARR by the experimental group sustained in the second year for the entire ninth grade class?* Tables 5, 6, and 7 present the results.

Table 5. Core Course Credits Earned for Ninth Grade Class						
	Number of students	Average number of credits earned	Number of failed core courses	Number of students with at least one failure in a core course	Percent of students with at least one failure in a core course	Average GPA in core courses
<b>Ninth grade</b>	517	5.63	192	89	17.2%	2.70

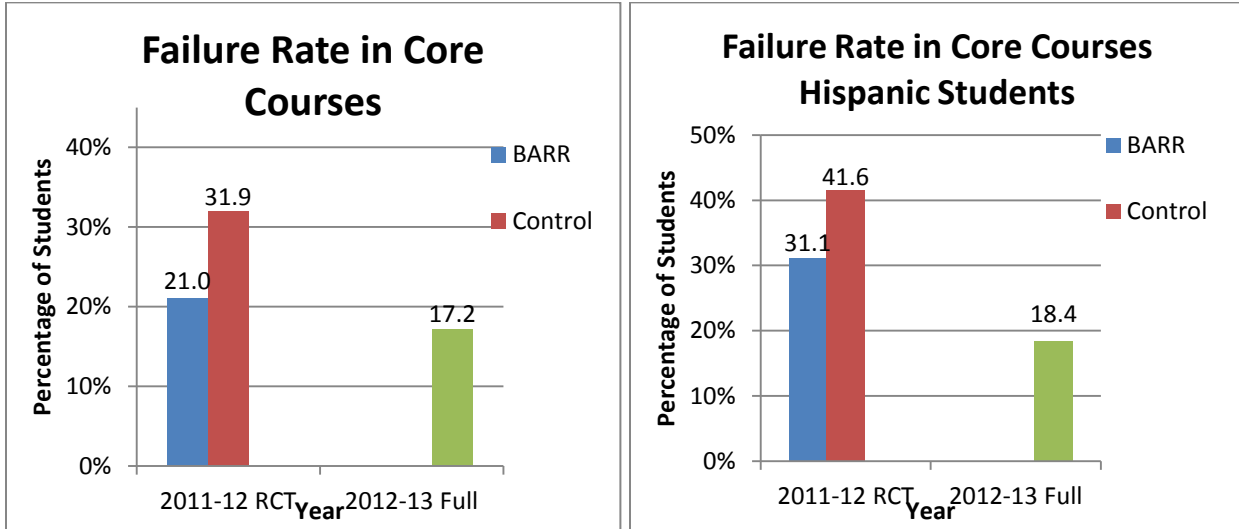
Table 6. Core Course Credits Earned by Group and Gender						
Gender	Number of students	Average number of credits earned	Number of failed core courses	Number of students with at least one failure in a core course	Percent of students with at least one failure in a core course	Average GPA in core Courses
<b>Girls</b>	261	5.76	63	39	12.3%	2.90
<b>Boys</b>	256	5.50	129	49	22.3%	2.51

Table 7. Core Course Credits Earned by Group and Hispanic Origin						
Ethnicity	Number of students	Average number of credits earned	Number of failed core courses	Number of students with at least one failure in a core course	Percent of students with at least one failure in a core course	Average GPA in core courses
<b>Non-Hispanic</b>	300	5.63	110	49	16.3%	2.82
<b>Hispanic</b>	217	5.62	82	40	18.4%	2.54

- When BARR was implemented school-wide, students earned roughly the same number of credits as the experimental group the previous year, and core course failure rate was lower at 17.2%.
- In terms of gender comparisons, this year, girls earned significantly more core class credits toward graduation and had significantly higher average GPA, as compared to boys.
- Hispanic/non-Hispanic groups earned near equivalent graduation credits and had similar failure rates in Year 2. In fact, the only significant difference between Hispanics and

non-Hispanics was in average GPA, with non-Hispanics showing a significantly higher average GPA than Hispanics.

In the two years of BARR implementation, our results indicate that the BARR program has sustained its effect on ninth grade students and significantly improved its impact on Hispanic students.



Students in the BARR program continued to earn more core credits towards graduation than the control group in Year 1. Academic performance for Hispanic students showed a 41% reduction in failure rate and the achievement gap between Hispanic and non-Hispanic students disappeared on all measures except GPA.

### Scientific or scholarly significance of the study or work

Our results demonstrate that relationship building focused on non-cognitive social/emotional supports, combined with rigorous academic standards and close attention to student performance produced higher academic achievement for students transitioning into high school. The RCT results were reviewed by Abt Associates, the oversight evaluators for i3 grants. As part of a grant review process, these results were reviewed by What Works Clearinghouse and found to meet their criteria for an evidence-based program without reservations.

From a scientific perspective, these results are notable given the use of a within-school student-level randomized controlled design which is relatively rare in educational research. This design requires support from school administration, cooperation from teachers, and a high level of commitment by all involved. This commitment by the school enabled us to test causal outcomes of the BARR model.

BARR is also unique in that it is a socio-emotional model that produces significant academic results. Positive relationships led to academic rigor by providing opportunities for (1) peer-to-peer learning and collaboration, (2) building positive, intentional relationships with colleagues and students, and (3) expanding support from parents and school leaders.

Our findings strengthen the link between developmental assets and academic performance. Scales and colleagues found that levels of developmental assets in middle school contributed to higher GPA three years later in high school (Scales, et al., 2006). Scales and his colleagues (Scales & Roehlkepartain, 2003; Scales & Taccogna, 2000; Starkman, Scales, & Roberts, 2006; Scales & Benson, 2007) described, based on many cross-sectional studies of sixth through twelfth grade students, the robust and consistent association between levels of assets and self-reported school attendance and grades.

Relationships are an essential prerequisite for academic success. Positive relationships are critical from teacher to student, teacher-to-teacher and student-to-student. Relationships are at the forefront of true educational reform and are the basis of the BARR intervention. The following quotes from BARR students illustrate the power of relationships to produce academic success:

*"All my teachers really told me that I could do better. That's why this year I'm in honors English, because my teachers suggested that I do that. So I'm doing it!" Brianna, 9<sup>th</sup> grade student*

*"I was going through a lot of stuff at home and my school helped me with everything. During a class, I'd get emotional, so I'd leave the room. My teachers wouldn't address me right then and there. They'd come get me in a different hour and talk to me about it. And they listened to me. That's something that I needed. They got me going again. I felt like I didn't want to go to school, they got me coming back". Bryant, 9<sup>th</sup> grade student*

BARR supports all students based on where they are and what they have experienced in life. It provides interventions that are responsive to student needs, while not lowering expectations and rigor. The strong relationships developed in BARR are at the forefront of true educational reform.



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