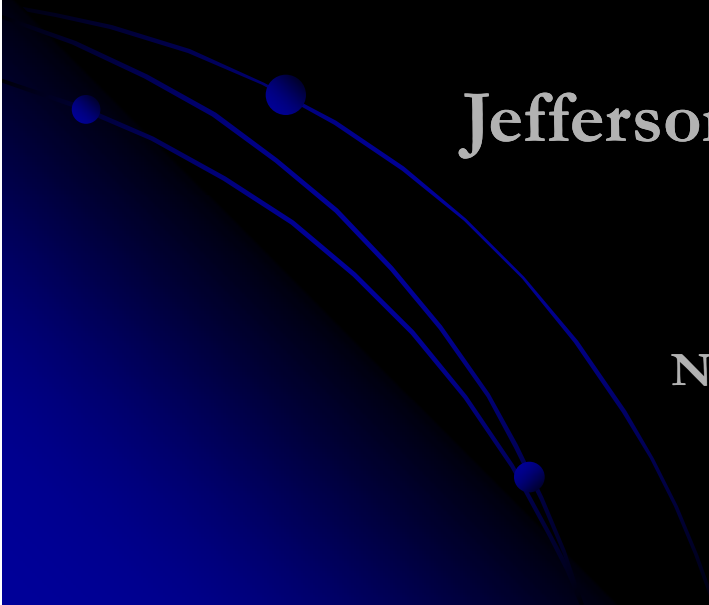


Using Technology to Do SMART Things for Teen Mothers

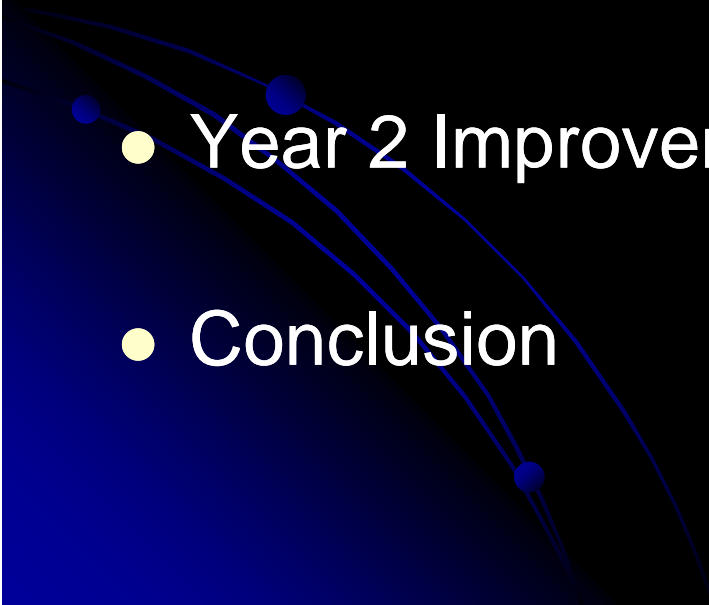
Project SMART: Science Math And the
Right Technology

Judi Vanderhaar
Beverly Winsch
Jefferson County Public Schools

National Evaluation Institute
October 4-6



Presentation Overview

- SMART Background
 - District and School Site
 - Year 1 Data and Recommendations
 - Year 2 Improvements and Data
 - Conclusion
- 

SMART Background

- Four year 1 million dollar grant
- Funded by the U.S. Department of Education
 - Office of Innovation & Improvement
 - Women's Education Equity Act Program (WEEA)
- Increase the number of women pursuing non-traditional careers (e.g. math, science, and technology)

District Site

- Jefferson County Public Schools
 - 13th largest *urban* school district in the nation
 - Serving approximately 98,000 students
 - 133 traditional schools
 - 22 alternative schools
 - JPCS motto “Get them in school – Keep them in school – Teach them to Proficiency”

SMART School Site

- Teen Age Parent Program (TAPP)
 - Founded in 1970
 - Due to high drop out of pregnant teens
 - 2 schools serve approx. 400 pregnant or parenting adolescent girls per year

SMART School Site cont.

- Offers On Site Services
 - pre-natal care, family planning, pediatric care, WIC, on-site social workers.
- Regular High School Curriculum
 - parenting courses
 - fully accredited child care facility
 - first facility in KY taking 2 week old infants



TAPP Mission Statement

To prevent school dropout associated with teen pregnancy by ensuring that all pregnant and parenting students are engaged in tasks that promote higher levels of academic achievement intellectual development, emotional stability, physical well being and self sufficiency.

Student Demographics

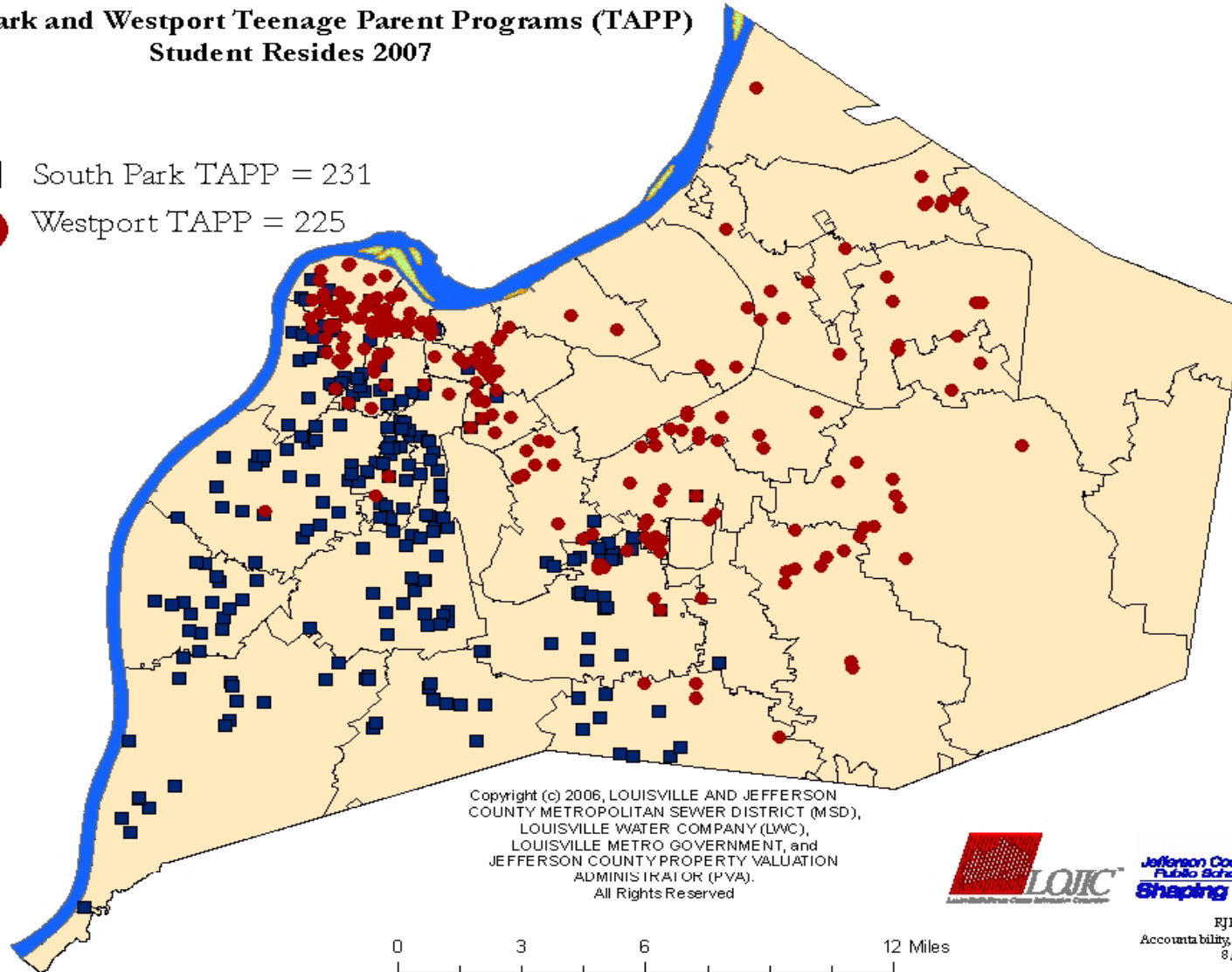
	TAPP (N=456)		SMART (N = 98)	
	N	%	N	%
School				
South Park	231	50.7%	49	50.0%
Westport	225	49.3%	49	50.0%
Grade				
Seventh Grade	4	.9%	0	0.0%
Eight Grade	13	2.9%	0	0.0%
Ninth Grade	73	16.0%	7	7.1%
Tenth Grade	122	26.8%	18	18.4%
Eleventh Grade	108	23.7%	30	30.6%
Twelfth Grade	136	29.8%	43	29.8%
Ethnicity				
African-American	224	49.3%	59	60.2%
White	186	40.8%	32	32.7%
Hispanic	33	7.2%	4	4.1%
Other	13	2.8%	3	3.1%
Family Structure				
Dual Parents	84	18.4%	14	14.3%
Single Parents	372	81.6%	84	85.7%
Lunch Status				
Free/Reduced	377	82.7%	90	91.8%
Pay	79	17.3%	8	8.2%

**Note: Demographics reported reflect students who were served in the TAPP schools anytime during the 2005-2006 school year between August 2006 – April 2007*

Map of SMART (TAPP) Participants

JEFFERSON COUNTY PUBLIC SCHOOLS South Park and Westport Teenage Parent Programs (TAPP) Student Resides 2007

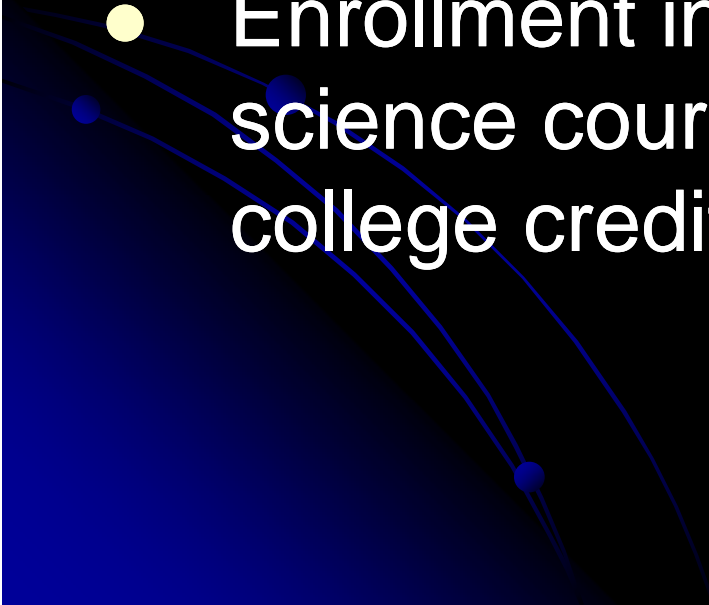
- South Park TAPP = 231
- Westport TAPP = 225



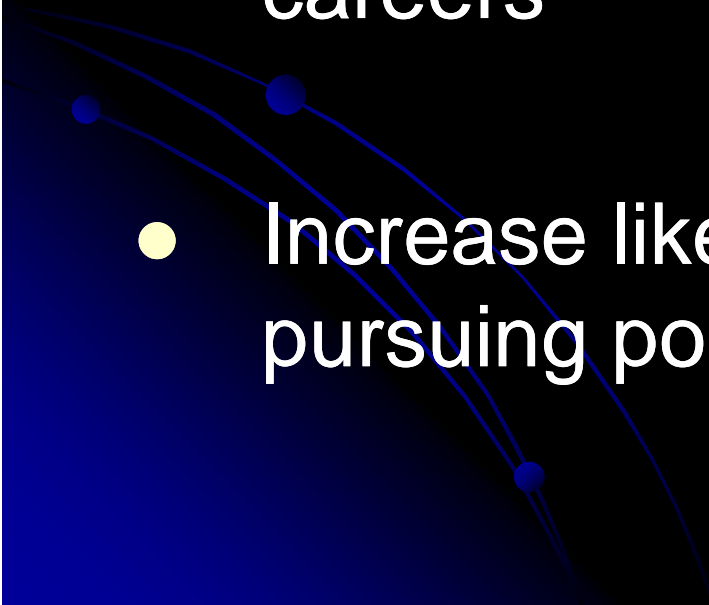
FJR:JV:pmd
Accountability, Research & Planning
8/3/2007



SMART Objectives

- Integrate technology into math and science classrooms to increase student achievement.
 - Enrollment in advanced online math and science courses (high school and/or college credit)
- 

SMART Objectives

- Provide school-to-work opportunities
 - Emphasize math, science & computer science careers
 - Increase knowledge of non-traditional careers
 - Increase likelihood of graduating and pursuing post secondary education
- 

Technology Investment

- Technology Resources
 - Laptop carts & Projectors
 - *ProScope* Microscopes
 - Graphing Calculators
 - Math and Science Software
 - On Call technology support for teachers in schools
- 

Technology Professional Development

- On going professional development
 - Math, science & technology teachers
 - How to embed new technology into classroom instruction
- Intensive Summer Technology Institute
 - 3 day professional development
 - Develop lesson plans using technology
 - Included teachers in other content areas

SMART Implementation

- Job Related

- Resume building
- Self-Esteem
- Career/Job Fairs
- Health Career Fairs

- College Related

- College Visits
- Preparing for college workshop
- Financial Aid workshop
- College Fair

SMART Implementation

- Student Clubs

- Future Business Leaders of America
- Louisville Education Employment Partnership
- *Shining Stars* Leadership
- Future Business Leaders of America
- Family, Career and Community Leaders of America
- Minority Teacher Recruitment Program

- School-To-Work

- Career Women Mentors
- Co-Op Placements
- Job Shadowing


SMART Community Partners

- Society for Women Engineers
- National Association for Women Business Owners
- Women in Law
- General Electric
- Humana
- Ford Motor Company
- Local Banks

Organizational Support

- Implementation Team- bi-monthly
- Advisory Board – quarterly
- Strong School Administration Involvement
- Project Manager in Schools
- Community Mentors

Year One Evaluation

- Retrospective Student survey
 - Activity Participation
 - Achievement scores (math, science, technology)
- 

Yr 1 Student Survey

Results of Retrospective Survey of TAPP students (N = 128)

Retrospective Results	Mean Before	Mean Now	Mean Change
Knowledge			
Career opportunities in general	3.02	3.90	.88**
Non-traditional career opportunities	2.30	3.15	.85**
Information Technology (IT) career opportunities	2.31	3.08	.77**
Computer Science career opportunities	2.27	2.98	.71**
Electronics career opportunities	2.28	2.95	.67**
Use of technology, including laptops, for learning	3.28	4.05	.77**
Likelihood			
Graduate from high school	4.45	4.88	.43**
Pursue a non-traditional career	2.60	2.98	.38**
Attend a 2-year college	2.81	3.41	.60**
Attend a 4-year college	3.02	3.60	.58**
Attend a post-secondary program other than college	2.63	2.84	.21*

** p < .001 * p < .05

Yr 1 Activity Participation

Target Actual

School to work

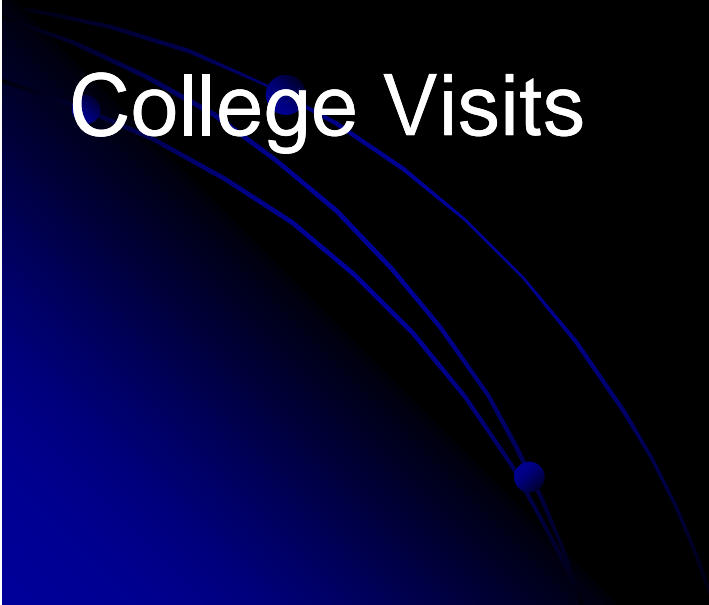
70

65

College Visits

70

91



Yr 1 Recommendations

- Students
 - More participation for freshman and sophomores
- Principal
 - Have program manager located in schools
- Evaluators
 - Technology Implementation
- Federal Program Director
 - Sole focus on students with intensive treatment

Yr 2 SMART Student Survey Results (N=35)

Retrospective Results	Mean		
Knowledge	Before	Now	Change
Career opportunities in general	2.49	4.23	1.74**
Math career opportunities	2.31	3.89	1.58**
Science career opportunities	1.86	3.40	1.54**
Information Technology (IT) career opportunities	2.09	3.34	1.25**
Computer Science career opportunities	2.17	3.26	1.09**
Electronics career opportunities	2.17	3.06	.89**
Likelihood			
Graduate from high school	4.23	4.34	.11
Pursue a career option in math, science, or computer science	2.00	2.91	.91**
Attend a 2-year college	2.60	3.26	.66*
Attend a 4-year college	2.86	3.91	1.05**
Attend a post-secondary program other than college	1.83	2.97	1.14**

** p < .001 * p < .05

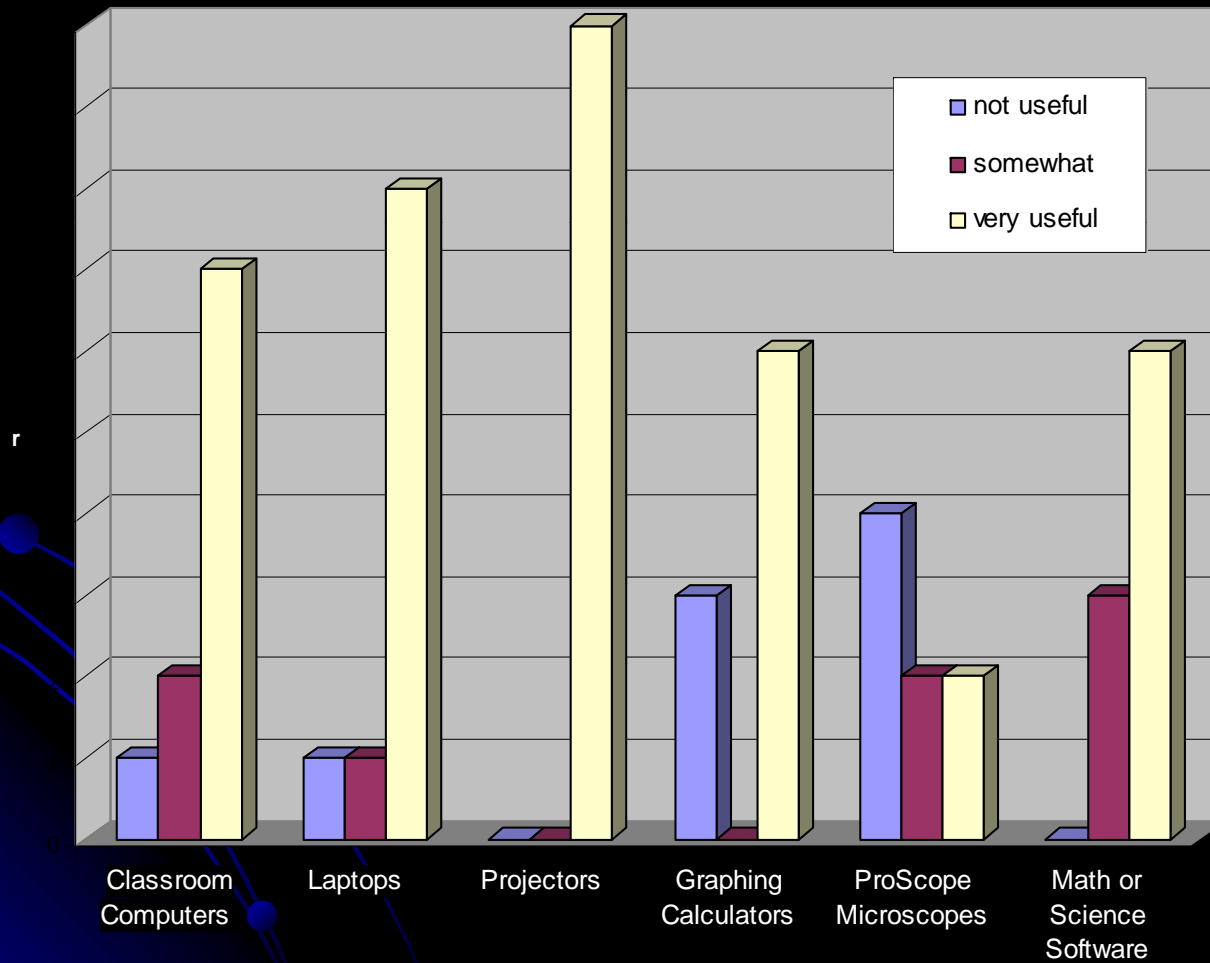
Retrospective survey scale for “knowledge”: 1-5 (1 = no knowledge, 5 = highly knowledgeable)

Retrospective survey scale for “likelihood”: 1-5 (1 = no likelihood, 5 = highly likely)

Teacher Survey

Usefulness of Technology

Math, Science, Technology Teacher (N = 10)



Technology Implementation

Student and teacher report of Implementation In Math and Science Classrooms

Average number of days per week the following technology is used in classroom (Scale 0-5 days)	Students (N=109)		Math, Science, Tech Teachers (N=10)	
	Mean	SD	Mean	SD
Classroom Technology				
Classroom computers	2.46	1.607	3.20	1.814
Laptop computers	2.40	1.320	1.70	1.767
Projectors	2.17	1.670	3.40	1.713
Graphing calculators	2.97	1.613	2.30	2.497
proScope microscopes	.42	.946	.50	1.269
Math or science software programs	1.57	1.566	2.00	1.944

Activity Participation

Target Actual

School to work

70

81

College Visits

70

56*

*23 SMART students (23%) participated in 2 - 3 different college trips

Achievement Scores

- KY State Assessment (Math and Science)
 - 2005 Math 36.65 Science 47.15
 - 2006 Math 46.65 Science 44.65
 - 2007 Not available until Oct 07'
- Technology (Assessment of Computer Skills)
 - Percent of students mastered all skills:
 - 2005 42%
 - 2006 74%
 - 2007 79%

Conclusion

- Showing success and spill over effect
 - Future evaluation activities
 - Quasi – Experimental Design
 - Dosage (some will have 3-4 years)
 - Goals: Sustainability and transportability
- 