

## SIF Implementation Case Study: Western Heights Public School District

SUMMARY	
District	Western Heights Public School District #41, Oklahoma City, OK
Needs	Put valuable information in the hands of stakeholders – principals, teachers, and parents
Solution	SIF implementation
Benefits	Increased student achievement over 30% Generated \$1.3m over the last 18 months in additional federal and state funding Improved accuracy, consistency, and timeliness of student data

DISTRICT PROFILE	
Date of Study	May 2006
District	Western Heights Public School District #41
Location	Oklahoma City, OK
Student Enrollment	3,200
Student Demographics	Culturally diverse: 70% free and reduced meals; 40% mobility
Number of Schools	6 schools: 4 elementary 1 middle 1 high
Teachers	275 teachers; 470 employees

### Introduction

Joe Kitchens, Superintendent of Western Heights Public School District #41 in Oklahoma City, Oklahoma, was on a mission to improve student achievement by putting valuable information in the hands of key stakeholders – principals, teachers, and parents. To accomplish this, he envisioned combining data from best-of-breed software applications across various functions. The aggregated data would be used to generate reports and analysis that would empower educators to adjust instruction and academic support to meet student needs. Western Heights chose to implement the Schools Interoperability Framework (SIF) Specification as the foundation for its Total Information Management solution because it was likely to deliver data interoperability essential to achieving its goals. Since deploying the SIF-based strategy, Western Heights has seen tremendous benefits from accurate, consistent, real-time data, the most significant of which are increased student achievement and increased state and federal funding.

### District Profile

Western Heights lies in the heart of Oklahoma City, Oklahoma, and serves 3,200 students. The student population is culturally diverse. Over

70% of students receive free and reduced meals, and there is a 40% mobility rate. The district is comprised of four elementary schools, one middle school, and one high school. There are 470 employees.

### Situation

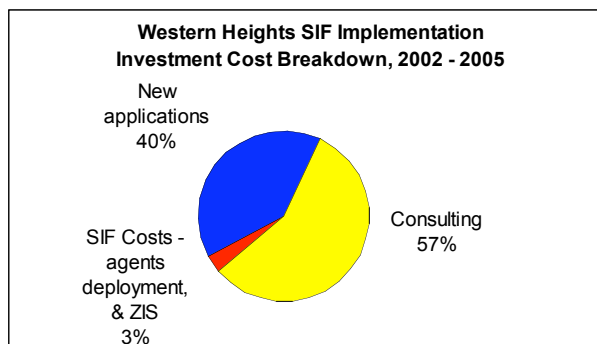
Western Heights, like so many other districts across the country, was challenged by the increasing demands for the up-to-date information needed to manage the district. They identified and purchased the best software applications in each functional area; however, without interoperability, these systems provided limited benefits. Kitchens realized several pieces were missing:

- To be effective, the applications needed to communicate with each other in real-time, allowing educators to combine data from different sources.
- The district needed fast reporting mechanisms to give decision-makers the data they needed to inform their actions.
- With a small IT staff, the district needed a Total Information Management solution that would increase access to high-quality information without increasing the work load.

Western Heights concluded that adopting SIF as the standard for its technology solution would provide these critical elements the district needed to succeed. The move would empower stakeholders at all levels of the organization to improve decision-making and, ultimately, the quality of education. The next step was to choose best-of-breed software and integrate the applications one at a time into the SIF environment.

In 2003, Western Heights began the SIF implementation with a “proof of concept” project focused on its student information system and one other application. After a year, the district began integrating its nutrition, library, and gradebook programs into SIF and continued to add applications in a staged manner ensuring stability before adding more each year. Western Heights worked closely with Mizuni, a K12 SIF integrator, to build custom agents, the ZIS, and advanced custom reports.

The district has spent more than \$1 million from 2002 – 2005 on new applications, consulting, and implementation to deploy the integrated SIF solution to this point (See Cost Breakdown graph). Western Heights chose to purchase new, best-of-breed software that was SIF certified for a total cost of \$398,000 (See Software Application & Cost Summary table). The district then added a data warehouse and custom reporting tools. Implementing a data warehouse and custom reporting tools at the level of Western Heights requires significant consulting assistance to adapt work flow and make required changes. Thus, the data warehouse, reporting tools, and other consulting cost \$573,000. **The \$34,000 of SIF implementation costs – the ZIS, SIF agents, and general SIF agent deployment – comprised the smallest category in terms of dollars spent on the SIF solution.** Western Heights now spends roughly \$95k annually to maintain these systems.



Cost Breakdown

Western Heights purchased its hardware with eRate funds at a nominal cost. To date, they have purchased 10 servers that reside at the district, one for every application. Western Heights already had networking infrastructure and wireless computer access. They continually upgrade hardware for the faculty and staff.

No additional staff was needed to support this implementation; in fact, Western Heights has reduced its IT staff by two FTEs to four people since the implementation began. To handle teacher training, Western Heights uses a train-the-trainer model. The district hired four former teachers who have full-time responsibility for training teachers on the new systems and processes and use Federal funding to support these positions.

The implementation to date has been a technical challenge because Western Heights was an early adopter of SIF. The process was “hard to get going,” says Kitchens. “There was not much ground broken five years ago. There was so much work to be done, which slowed down the process.” Kitchens credits his staff for “working hard and staying the course. Their persistence has paid off.”

The implementation was not only a technical challenge but also an exercise in implementing change. Administrators and principals met twice per month during the entire first school year as they began the implementation of the student information system to establish consistent data rules, codes, and processes. The end result was a revision of the way school operations were conducted. One example of a new process was the establishment of central registration for any new student in the district. “With the exception of the janitorial staff, nobody in the district is doing their job the way they were three years ago,” says Lisa McLaughlin, Assistant Superintendent of Western Heights.

Western Heights will continue to add new applications to their SIF implementation. They would like to build a SIF certified Special Education system and add an Assessment Program. When evaluating new applications, SIF certification is a key consideration in the purchase decision. “We will not talk to any vendors without SIF operations in place,” said Kitchens. “The conversation is a short one.”



SOFTWARE APPLICATION & COST SUMMARY							
	Software Application	Type of Application	Vendor	SIF agents & ZIS	New Applications	Consulting	Date Deployed
1	Chancery SMS	Student Information	Chancery	\$5k	\$65k	\$33k	2002
2	LunchBox	Child Nutrition	Data Futures	\$5k	\$32k	-	2003
3	ZIS		Mizuni	\$6k	-	-	2004
4	RoutePointe	Transportation	Visual SI	-	\$32k	-	2004
5	Destiny	Library	Follet	\$5k	\$45k	-	2004
6	Pinnacle	Gradebook	Excelsior	\$5k	\$27k	-	2004
7	Accelerated Reader	Instructional Support	Renaissance Learning	-	\$75k	-	2005
8	Achievement and Performance Series*	Assessment	Scantron	\$5k	\$62k	-	2005
9	OK SDE WAVE	OK State Student Information System	CPSI	\$2.5k	-	-	2005
10	Data Warehouse	Reporting	Mizuni	-	\$60k	\$540k	2005
	TOTAL Investment			\$34k	\$398k	\$573k	
	% of Total			3.4%	40%	57%	
	Annual maintenance			-	\$95k	-	

\* Custom agent used

## Benefits

### *Increased Student Achievement*

The SIF implementation coupled with strong reporting capabilities at the student, class, school, and district levels helped inform instructional decisions based on student needs. The result has been an increase in student

achievement on statewide assessment exams. As illustrated in this table, scores have increased more than 30% district-wide over the last two years. (For more graphs illustrating increases in student test scores, see graphs 1–4 at the end of this section.)

#### Oklahoma School Accountability Data Report Academic Performance Index of Adequate Yearly Progress

	2002-2003	2003-2004	2004-2005	% Change
District-wide total	760	872	1024	35%



*“It [SIF] makes NCLB make more sense. It improves curriculum and instruction. It also brings operational efficiencies to the district. You cannot do things the old way. You must change the way you operate, and change for the better. Roll up your sleeves and learn a new aspect of your trade.”*

– Joe Kitchens,  
Superintendent  
Western Heights Public  
School District

When asked to clarify if other district initiatives were affecting student performance on state tests, Kitchen replied, “Ninety percent of the improvement is highly related to this SIF implementation.” There were no other significant initiatives going on during this time.

The ability to run reports quickly and efficiently has changed the job of Assistant Superintendent Lisa McLaughlin. Rather than spending her time compiling data and ensuring their accuracy, she now has “time to answer ‘So what?’ at principals’ meetings.”

**Predictive Modeling**

Western Heights is working in partnership with statisticians at Oklahoma State University to employ linear regression-based analysis to predict student results on Oklahoma state tests. Statisticians used data from student demographics, Scantron’s Performance Series tests, and the Stanford 9 as predictors. Consolidation of data from these various sources and the powerful analysis it allows would not be possible without the SIF framework as the basis for applications to “talk” to each other.

**Funding Increases**

“What is the socioeconomic status of our students? Bringing validity to the counts of the student population,” says Kitchens, has led to an increase in state and federal funding. Western Heights has seen an increase of \$1.3m in state aid over the last 18 months due to more accurate and reliable reporting. For example, Western

Heights has been better able to identify gifted students. Three years ago, there were 265 students identified as entitled to gifted services. Now that the synthesized reports more accurately reflect who meets the test score criteria, 80-90 more students per year have been identified as gifted. At \$1,000 per gifted student, the increase in state funding has been \$80k-\$90k.

In addition to state funding, Western Heights has also experienced an increase in federal funding. Western Heights received an increase of \$750k in annual federal funding due to more accurate tracking of students who are eligible for free and reduced meals. Before SIF, Western Heights observed a significant decrease in enrollment in the free and reduced meals program: 50% at the elementary schools, 40% at the middle school, and 30% at the high school. This drop was unexpected because the same elementary students fed into one middle school and one high school so the percentage should be consistent across schools. Due to more accurate data and the Mizuni ZIS’s enhanced reporting capabilities, Western Heights is now able to identify and update data when family meal status has changed or when there is a discrepancy in meal status between siblings. Now all the schools within Western Heights maintain a similar and consistent meal status percentage of 70-75%.



The percentage of students who are eligible for free and reduced meal status qualifies the district for additional Title I funds for disadvantaged students. The same Title I percentages also translate into eligibility for several other federally funded programs. Since all Western Heights schools are categorized as Title I sites due to their demographics, students in the district are best able to take advantage of these benefits through accurate reporting of these counts.

The increase in district funding through these accurate student counts has afforded Western Heights the opportunity to invest in new programs. Western Heights has been able to move to full-day kindergarten and a full-day early childhood program. While it is too early to see the results of these programs on student achievement, Kitchens is confident that the investment in these programs will be worthwhile.

#### ***Fast Generation of NCLB Reports***

Due to the large investment in consulting to create custom reports, Western Heights is now equipped with a collection of hundreds of reports that consolidate data from multiple application in the “blink of an eye”. Since implementing the data warehouse, efficiency gains in NCLB reporting are immeasurable. In only

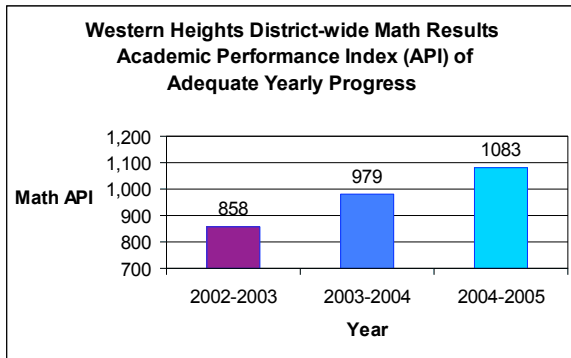
15-20 seconds per report, Joe Kitchens runs all NCLB reports. With this improved reporting capability, Western Heights has not made a single hire to keep up with state and federal reporting requirements.

#### ***Real-Time, Accurate, and Consistent Data***

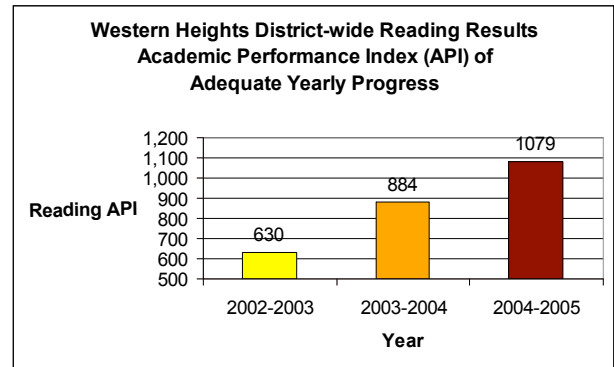
All of the benefits previously described would not be possible without accurate and consistent data that moves real-time between systems. Interoperability has led to a single point of data entry, reduced overall data entry time, and decreased trouble-shooting time.

### **Recommendations for Future SIF Implementers**

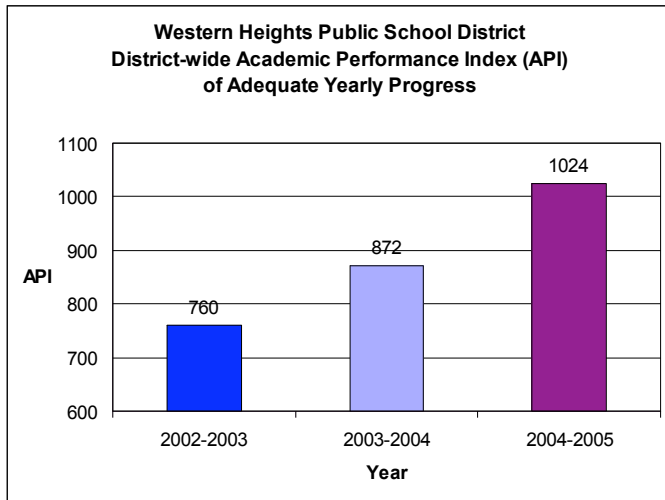
Western Heights has become a model for the state of Oklahoma. Nine other districts in the state are pursuing the Western Heights SIF implementation model. For districts considering SIF implementation, Kitchens urges, “They should do it soon. It makes NCLB make more sense. It improves curriculum and instruction. It also brings operational efficiencies to the district. You cannot do things the old way. You must change the way you operate, and change for the better. Roll up your sleeves and learn a new aspect of your trade.” Kitchens did, and it has certainly paid off.



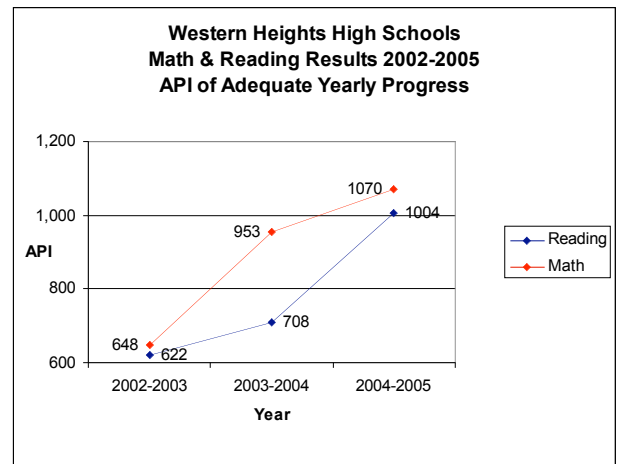
Graph 1



Graph 2



Graph 3



Graph 4