

***The New Face of School IT:
Outsourcing for ROI, Accountability, and Educational Value***

by Bud Gillan, Educator and Consultant



“This is a no room for OOPs business.”
a great American educator

The New Face of School IT: Outsourcing for ROI, Accountability, and Educational Value

by William Gillan, Educator & Consultant

Synopsis.

Today, effective networked technology is essential for today's schools. Yet, keeping technology current, effective, and running is a huge challenge for K-12 school districts. Educational needs are at an all-time high, but districts are being asked to do more with less. The complexities, volume, and changes in technologies challenge even the savviest of IT professionals. Technology, educational achievements, and fiscal requirements challenge every school and budget in America. From superintendents to CIO's to principals to teachers, everyone is accountable. But when it comes to school IT, going it alone has become a thing of the past. Schools are reaching for outside help. Technically, some school districts are on life support. Some are thriving. This white paper examines the current state of school IT, the reasons behind the outsourcing phenomena, and one company's unique approach to schools as a case study that provides guidelines and solutions to these challenges.

1. School IT Today and Tomorrow.

Today.

When it comes to technology in our schools and businesses, most folks are shocked to find that the costs of purchasing technology represents only about 15% of the total costs for the life of the products. As education is finally taking a front stage in America, all areas are under review for effectiveness, costs, and results. Education has never had more challenges or tighter funding. From the student in the classroom to the superintendent in the District office, everyone is getting the message of accountability. The honeymoon between education and technology is over. Yet, technology is clearly one of keys to helping improve and reform American education, particularly in K-12. Today, new tools and companies are helping educators with these challenges.

The Network is Down.

It wasn't long ago that this didn't really mean much. Of course those were the days when ROI (return-on-investment), and its metric cousin TCO (Total Cost of Ownership), only had meaning to bean counters and economists. Today, *the network is down* changes everything, even in schools. Now, networks and ROI are in the same boat. Their demise creates an "all hands on deck" scenario for districts and schools.

Networks, and networks of networks, are now increasingly homogenized and integrated into everything we do with vital information and communications. Networks and our personal connectivity are accessed through all kinds of digital devices. Being connected means being able to work, learn, play, and live. Being connected has become part of our well-being. It is part of our era. Technology is woven into the very fabric of our society, including education. It is no longer in a *stand-alone* world, it is a *networked, connected* world.

Connected Schools.

Now schools *are* connected. Networks and networking have fundamentally changed education, with much more to come. Just as computers did earlier, interconnected networks and interactive technology offer profound opportunities for a connected generation now in our schools. Today,

It is no longer in a stand-alone world, it is a networked, connected world.

generations that think of the Internet as we think of television, will take more than the proverbial paradigm shifts.

Connected kids going to connected schools can unleash huge educational potential. We learn, in fact, by constructing and connecting ideas and concepts. Networks are just now really starting to connect content, curriculum, teachers, students, and measurable learning. Also, comprehensive networking provides significant technical challenges.

Garden Hoses to Fire Hoses.

Even now engineers are working with educators to develop content for broadband, as network bandwidths will change dramatically. It will be like going from garden hoses to fire hoses. While microchips are still around, soon nanochips with circuitry thinner than hair will make online content real-time. This is good news for education because in the long run, faster, more effective, intelligent networks will be able to do more for teachers and learners. These fire hoses, like IT itself, play an increasingly vital role in education with *inextricable ties* to all aspects of education. Keeping up with changes and advances in technologies and how to use them is a mind-numbing task. However, *keeping current and connected* is not really a matter of choice. It provides the hope for teaching every child, more so than anything else in the future.

Seeing is Believing.

New technologies and better networks are interlocked with our learning. It is IT that is delivering new information, meaning, and understanding to our doorstep and classrooms. Technology and education are powerful allies in the pursuit of knowledge at any age level. Look how dramatically improved monitors has changed resolution. Earlier stick figures have turned into real-life images. Now everything from photomicrographs of living cells to satellite images of continents and weather systems can be studied in our schools as they really are. Resolution of the real images takes more storage, faster networks, and better software. As they say, *technology* is in the details.

Better IT. Better Understanding.

In 1994, I was sitting in an IBM technology meeting with TFT (thin film transistors) scientists who told us TFT screens would not be limited to laptops, but one day be on every desk. We laughed then. No one would consider going back now. Technology has delivered new levels of visual resolution to our schools, enhancing our ability to see and understand. New, improved networks are delivering information, data, and realities everyone can see, connecting truth and learning. Clearly, we are visual learners and networking technology continues to help us see as still images and video infuse curricula. A few years ago the impact on storage and data rates would have been catastrophic, but is manageable today.

It used to be science teachers presented theories on how atoms look. Now, networks deliver pictures of actual atoms and molecules through images from scanning tunneling microscopes (STM). Yes, now we can *see* atoms. Chemistry, physics, and biology have been changed forever, and it is technology that will help deliver those *changes*. Imagine waiting for new textbooks to come out to see these incredible sights.

Technology allows schools and teachers can stay connected to vitally important developments, as well as the best ways to teach content in their state standards. In numerous ways IT makes a difference in teaching and learning. As *technology itself* is changing our world at record rates, information technology (IT) needs to keep pace in our schools.

*Keeping up with changes and advances in technologies and how to use them is a mind-numbing task. However, **keeping current and connected** is not really a matter of choice.*

Be Prepared.

The effectiveness of a school and a district is directly related to the health of its networks and the ability to use them. This is a mindset beginning to take root in education. Business understood the need years ago where technology never played second fiddle. If a business did not have the technical talent in-house, it went outside for help. Businesses in an information age with second-rate technology are not businesses anymore. This is a lesson for schools and K-12 to learn. Planning and preparation for the implementation and support of technology is just as important for schools in the information age.

Starting even further back, education has needed even more help to catch up and keep up. As a result, outside resources is part of most districts' strategies for planning, implementation, and support. IT today is like railroad tracks as they run parallel in purpose and function, one track is for today's needs and one track is for tomorrow. It takes both tracks for the train to run. District IT preparation is now an enterprise-level consideration and quite complex. Knowing *what to do* technically is only part of the puzzle. A clear focus and understanding on the real value of outsourcing and ownership costs (TCO) are new requirements for both Districts and technology companies.

GAP Analysis.

Strategic plans for building and maintaining connected schools requires right-sized engineering, funding, and commitment. The view here is that this is the *new face of school IT*, education, and technology are linked beyond any current thinking. Educational value and ROI can and must be delivered at the same time. Economic and technologic analyses show that closing the infamous technology gap, the digital divide (*providing technology access*), and educating schools about GAAP (*generally accepted accounting principles*) methodologies determining real value are significant challenges. Districts need internal and external measurements to calculate and track TCO. Staying ahead of this curve will ensure continued viability and funding. Most Districts have established 5-year technology plans, but few have a means to measure the ROI.

Growing Complexities.

Even as connectivity is getting simpler, keeping networks and internetworks from going down is getting more complex. Technology changes and needs are accelerating. The growth in information and taxonomies of content provide challenges in storing, finding, mining, and utilizing data. Digital storage, archiving, and utilization are now major concerns for education. Testing, item analysis, regulations and compliance, IEP, CIPA, NCLB, and every other educational requirement are part of accountability.

Student testing and tracking performance, is now a function of IT departments. Collecting, storing, analyzing, and interpreting student data would be impossible without technology. Computers do this very well. Diagnostic and prescriptive software tools are helping make schools more effective, and more accountable. School IT is helping to change the shape of instruction in many ways in today's schools. While this role adds yet more tasks to IT workloads, it is complex work that is essential to assess student achievement. Achievement and accountability are being driven by IT infrastructure.

Enterprise architecture and topology have to be included in with legacy and current networking complexities. Networks and subnets require *new security measures* that one skilled District IT Director told me was the most important challenge he faced, taking over 20% of current IT

Educational IT staffs are in the same situation as their counterparts in the business world are... the technology is going to have to work for the school to work.

budget. *Network effectiveness, intrusion detections, hacking, filtering, layers of technology and firewalls, legacy systems, multiple OS's, interoperability, backward compatibility, coding and applications patches, and a daily dose of device drivers changes*, and one begins to sense the levels of engineering and skills needed by today's IT professional. We haven't even *got* to the teachers yet. Turning to outside expertise not only makes sense, but in many cases it is essential.

Can You Turn Down the Volume?

Today, business and education run on the **assumption** that the technology will be working. IT and its support are a big deal. School productivity, administrative work, classroom teaching, student information, and many learning opportunities are lost without functioning networks. IT staff face **complexities** in their work, and also sheer **volumes** of workload. Much of the work is outside their current skill levels, and compounded by the need to put out the fire *du jour*. Even in situations where IT staff are capable of doing the work, they are responsible for supporting a PC-to-user ratio that is significantly higher than in the business world. Administrators, teachers, *and* students must be factored into workloads. Expertise in District IT departments is growing nationally, which is good news, but the volume of work compounds the support problems because staff time is gobbled up by low level and low tier tasks.

Much of today's IT world is marked by maintenance and support, but product life cycle, warranties, software fixes, ongoing virus and security issues, and content control. End-user support of administration and teachers who are across the spectrum in terms of computer skills, are in constant need of *functionality help*. Questions like, "How do I do this?" or "How does this software work?" or "Can you fix my printer?" are so common, IT staff have volumes of end-user work. The net result for school IT is that there are more PCs to support and each one is part of a larger network configuration sharing routers, printers, sub-nets, server space, wireless and Internet access. **Complexity and volume** makes for compounded demands on IT professionals.

Under-prepared teachers in terms of technology training and professional development is a problem that inhibits classroom use, and puts more pressure and workload on the IT staff. Districts that invest in teacher education to improve their IT skills help reduce IT costs, as well as improve instructional uses of interactive technology. End-user support will always be necessary, but today this generates an inordinate amount of work.

Loss of Control.

Computers and networks provide *extreme* appeal for students. Younger students walk up to computers with their right hand *extended, mouse-ready*. Many adults still approach computers with their hands *behind* their backs. While technology provides incredible opportunities for education, student use of technology in many schools and districts is out of control. Students have *significant* technology advantages over teachers (and many IT professionals). This is not news, but the degree to which control has been lost brings many classrooms and labs to a standstill. Understanding and using technology is second nature for this generation. Few teachers can keep up. There are layers of student challenges too numerous to mention here, but simply stated, this loss of control has translated into chaotic situations.

With the pressure to implement more technology into the curriculum, teacher frustration in this area may be the most important problem that needs to be fixed. Time and again, teachers tell me they have stopped or drastically reduced their use of technology because the students just take

<p><i>A clear focus and understanding on the real value of outsourcing and ownership costs (TCO) are new requirements for both Districts and technology companies.</i></p>
--

over. For some students this is a game, but for others schools provide high-speed access to inviting content and websites, and still other students move into maliciousness.

Monitoring and supervising student computer use is federally (CIPA) mandated, but content filters and appropriate use contracts do little to dissuade eager young minds. Threats from the outside because of personal email, browser search engines, marketing push from all kinds of companies, and increased criminal activity, all add to the challenges of network use. We are still amazed when some 13-year old student is lured away virtually and otherwise. But it still happens. Yet, this area too, falls back on the IT staff. A new generation of networking software holds significant promise in this area providing teachers with tools for supervision and instruction.

Teaching, TCO, and Technology.

IT staff and teachers are in a constant race to keep up with these exponential demands of changing technologies. Translating technology costs into learning is emerging as ROI challenge. *Teaching, TCO, and technology* are inextricably tied together. Some may view the world of IT as routers, servers, operating systems, programming, storage, and digital filters, but any discussion about school IT today would be *incomplete* without considering the *expanding role* IT plays in teaching, learning, and communication. Listen to the advice regarding teaching and technology hits right where the tire meets the road. Perhaps the *T* in *TCO* should stand for Teacher:

Our business is student learning and achievement. Teachers will plan technology-based instruction and student learning activities if they are confident that the computers and the network are operational. Based on my experience in encouraging and expecting teachers to integrate technology into instruction, I know that teachers must be able to depend on that technology. Undependable technology interrupts instruction and stresses teachers. They do not have time to make alternate plans in the event that the technology does not work. If teachers cannot depend on the technology, they will not use it.

[Dr. Nancy Baird, Associate Superintendent, Commerce City Schools \(GA\)](#)

Student time-on-technology will continue to be a key element in education for the near future. It will be the **quality** of this student time that will turn TCO into real value. Today, even learning has a price, but not learning has an even higher price. Today's technology costs can have the appetite of a hungry teen. One of the purposes of this white paper is to provide an up-to-date assessment of school IT, assist school districts in solving IT needs, and provide a model study for outsourcing technology partnerships. The remainder of this research focuses on *needs analysis and solutions*.

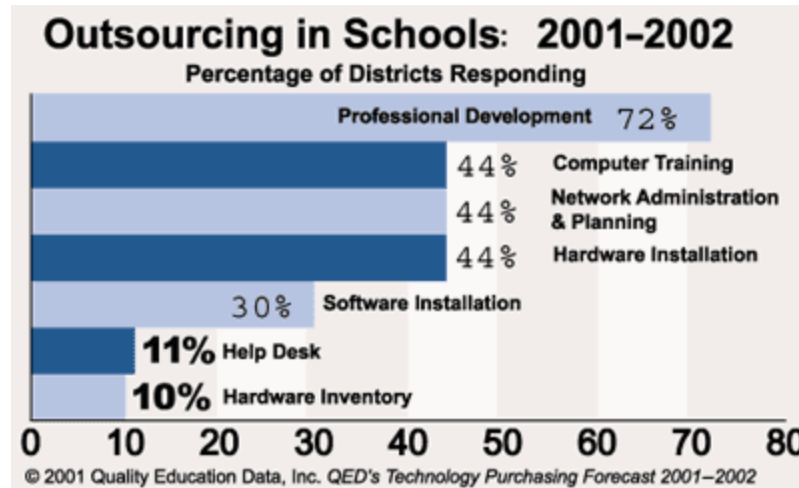
2. The Case for Smart Outsourcing.

Who's on First.

Outsourcing is not a mystery to schools. The real mystery deals with solving: *where, what, when, how, how much, and who*. Going to outside vendors for help is not new to schools. Textbooks, construction, food services, transportation, HVAC...you name it and schools have been intertwined and reliant on outside help for years. Why should technology be different? It shouldn't, but there must be real reasons to spend hard-earned taxes dollars on any expense item.

If teachers cannot depend on the technology, they will not use it.

School culture and buying habits change slowly, particularly in regards to technology. Many school districts in the past would rather have better and higher firewalls to protect their technology. Now, this trend is changing as the search is on for experienced network and technology companies who can provide engineering and integration services. Finding outsourcing companies was not a big deal, but finding quality ones *who* can do the work is.



Why.

For most schools, **core competencies** are not cable engineering, networking architecture, telecommunications engineering, systems integration, hardware repair, network engineering, and software development. Teaching, curriculum, administration, and education are their core competencies. Professional development specifically in technology is also an area of need (see chart below). Schools recognize this, but many times also tackle non-core areas that they might even to be eventually able to do.

Peter Reilly, Director of Technology for the Lower Hudson Regional Information Center (NY) relates this true story that unfortunately is repeated nationwide.

The teaching staff at the high school is upset because even though there is a T1 connection, getting on the Internet and getting to software can be unreliable and slow. Network engineers find that the network has daisy chained stackable, shared hubs. There is no concern for segmentation of the network and there is no high-speed backbone for the servers and other network resources.

On the flip side of Peter Reilly's story is the smart approach for a **network audit** used by Poway United School District (CA) and the Director of Education Technology, Charlie Garten. Poway USD is a strong technology district, and uses an outsourcing company, particularly for *selected tasks* such as VLAN, SAS, networking, and telephony.

PUSD's network had grown immensely over the last 5 years without any time to take a breath. With all of the additional servers, network upgrades and new technologies running over the network, we decided it would be a good idea to have an independent audit of our network. We had some hiccups now and then, but nothing that we could put our finger on as to why. Although we thought the network was pretty sound, we weren't surprised to learn

that we had more room for improvement. We learned that with a little more refinement of our network settings we could gain considerable speed and more stability.

Garten stated they used a technology outsourcing partner to perform the network audit. “Because they have an intimate understanding of our network topology, we use them for additional support when we are short handed or need probing tools to troubleshoot complicated problems. This relationship has been key to maintaining a stable network.”

When.

Can outsourcing technology really be better, cheaper, and faster? Most districts are already doing some sort of outsourcing, which now ranges from one extreme, ***all of it*** (Buffalo Public Schools) to ***select functional areas*** (Poway, CA) to ***small service contracts*** (Blue Valley School District, KS).

In general, there are several **types of outsourcing** services including:

- **on-site/in-school** – which provides end-to-end complete services for hardware, software, and networking,
- **as needed/on-call** – scheduled maintenance, break/fix modes, emergency services,
- **remote/online access** – off site expertise is provided via phone or Internet services through secure remote connectivity which may be full-time, part-time, or emergency services,
- **complete contract** – all three of the above services are provided and all IT services are provided 24/7/365,
- **hosted environment** - a school district’s online environment is vendored out entirely or partially (intranet and internet), similar to ASP models in business.

How Come.

The following are the ***Top Ten Reasons for Outsourcing IT*** (Scholastic) as reported by schools in current research. It is interesting to see the spectrum of the reasons. Most are common sense and generic, but all point to vital responses to IT needs and the ***value of outsourcing***. Interestingly, the reasons fall into three different categories that are *economic, technical, and educational* in nature. In actual interviews and research with school districts this was used as a checklist. The District responses took the research a few steps further, drilling down to specific reasons and details. This Top 10 provides any District or school with a set of reasons to qualify their planning and implementation of IT resources. School executives and IT Directors discover and determine new ways for saving money using this checklist.

Top Ten Reasons for Outsourcing IT

1. *To free up more time for the core mission: educating kids.*
2. *To reduce overhead and staffing costs and improve the level of service.*
3. *The project is too difficult, the learning curve too great, or is simply outside the area of expertise.*
4. *The project is at such a low level that it is more time-efficient and practical not to dedicate internal IT staff.*
5. *An outside vendor can do the project for less money.*
6. *The project is temporary, but will require a significant amount of staff time.*
7. *The project is ongoing, but is not a core competency; e.g. data storage and maintenance or payroll services.*
8. *The project will require a change of process that is meeting some resistance internally.*
9. *To augment and supplement the current IT staff on a regular basis.*

10. *To be part of a checks and balances system over time.*

Source: <http://www.scholastic.com/administrator/fall02/>

In the Rearview Mirror.

In 1997, outsourcing for K-12 schools was seen as temporary condition until districts got their technology legs under them and could walk on their own.

Most districts recognize that eventually they must wean themselves from outside experts. That doesn't mean that educators must become experts in wiring or designing computer networks-- though many districts elect to hire such experts. But they need to understand enough about computers and programs that they can evaluate new products and technologies for classroom use. And they should be capable of solving everyday software and hardware headaches, from frozen screens to system crashes.

The reality of using outside expertise today is a far cry from the 1997 outsourcing projections that are now in the **rearview mirror**. Today, some analysts **say reliance on school networks is increasing ten-fold each year**. This is mind-numbing stuff. In the past decade, outsourcing was primarily done with non-core functions, but today even core functions are being shopped out. It turns out, as one outsourcing expert told me, critical school data is better off with secure high-tech vendors in many cases. Of course, dynamic redundancy is still a rule of thumb for the most vital information regardless of who stores it. Nevertheless, outsourcing has **real value** in multiple areas. Weaning is not one of them.

Outsourcing for Value.

The Gartner Group, a consulting and technology company that has studied business and technology implementation for many years for 15 years, has now focused on the K-12 industry. Their new research regarding **K-12 outsourcing**, Gartner concludes significant benefits from outsourcing to include *more instructional time, faster development and deployment of tech-based projects, reduction in overhead costs, and improved service.*

A year ago, Buford City Schools (GA) embarked on a new technology project. Through an established IT outsourcing relationship, a new middle school wireless project was attempted. Tackling the wireless project has resulted in significantly increased student **time-on-technology** and **teacher interest**. It has been so successful according to **Lori McCoy, Director of Technology**, they are expanding the mobile wireless project district-wide. Her estimates are that Buford City Schools are at least **two years ahead** of where it would be if they did not have an IT partner.

Poway USD and Buford City are different examples of being able to leverage relationships in terms of time, talent, and tighter dollars. ROI for these districts come in terms of maximizing networks and engaged teachers. Hidden from TCO calculations are satisfied customers because teachers and technology are working well. But how can we take the Buford City and Poway examples of outsourcing and calculate real value for tax-payers?

Once a school district has reached a point where it understands the real value of technology, its inherent complexity, and has a general idea of the issues involved in the total cost of ownership, it can then begin to weigh the pro's and con's of outsourcing (Reilly). In the case of Dallas ISD, this assessment led to a 6-year complete IT contract for HP. HP will work with a local company for

Educational stakeholders are seeking evidence that their expensive and highly visible investments in technology are meeting programmatic needs and that these IT investments are closely monitored and well-managed.

implementation, but the magnitude of this agreement has opened a lot of eyes to the economics and potential savings by outsourcing IT.

Taking TCO to the Classroom.

The Gartner Group has teamed up with the *Consortium for School Networking* (CoSN) and the *U.S. Department of Education* and together extensively research the specific area of K-12 TCO and ROI through the *Taking TCO to the Classroom* initiative. This spring, the research and a new web-based **K-12 TCO Tool** will be published. Their K-12 TCO Tool will be free to all public school districts with federal NCES numbers. For further analysis and information on why TCO matters, methodologies for data collection, and additional considerations and best practices for TCO, the website is available below. Understanding and using such TCO tools is an important part of understanding and taking steps to reduce costs and leveraging resources. Gartner K-12 TCO Tool includes the metrics for including and comparing outsourcing vs. in-house costs.

Source: <http://k12tco.gartner.com/home/>

"Understanding how technology can better support our overall education goals is essential, especially as today's educational tools become more and more reliant on technology. Having a tool that will help us track long-term technology investments will help us meet our goals and some of the accountability requirements outlined in the No Child Left Behind Act of 2001."

Bob Moore, Executive Director of IT for Blue Valley USD, KS

Sara Fitzgerald, Project Director for CoSN, focuses on the critical areas of costs, needs, and implementation. Her TCO checklist provides a starter kit for districts wanting to focus on *using metrics* to analyze total costs and investment returns. This **TCO Checklist** has six key areas for any K-12 District to include during technology planning and budgeting:

1. Budget adequately for training and professional development.
2. Explore support and outside options.
3. Anticipate technology life cycles and replacements.
4. Get standardized on hardware, software, and operating systems.
5. Establish connectivity for the enterprise today and tomorrow.
6. Estimate the impact of retrofitting new technology in old buildings.

Source: www.classroomtco.org

Gartner defines Total Cost of Ownership (TCO) as a *comprehensive set of methodologies, models, and tools* to help organizations better measure and manage their IT investments. Specific K-12 TCO and ROI tools to measure costs and effectiveness of technology initiatives are becoming more common and showing up on most radar screens. True adoption of the TCO methods and metrics is underway. In the future, schools and districts that are unable to document the initial and ongoing costs of IT expenditures or its ROI will jeopardize funding and grants. ROI in the business world is based on revenue, but the K-12 arena is measured in terms of *administrative savings and student achievement*.

CoSN, who has been a leader in this area for some time, has gone a step further. In a recent interview with CoSN, CEO Keith Krueger spoke about the new resources and courses K-12 they have under development. As a non-profit consortium of leading districts, technology

companies, and educational leaders, CoSN works to provide resources where there have been very little. Krueger states:

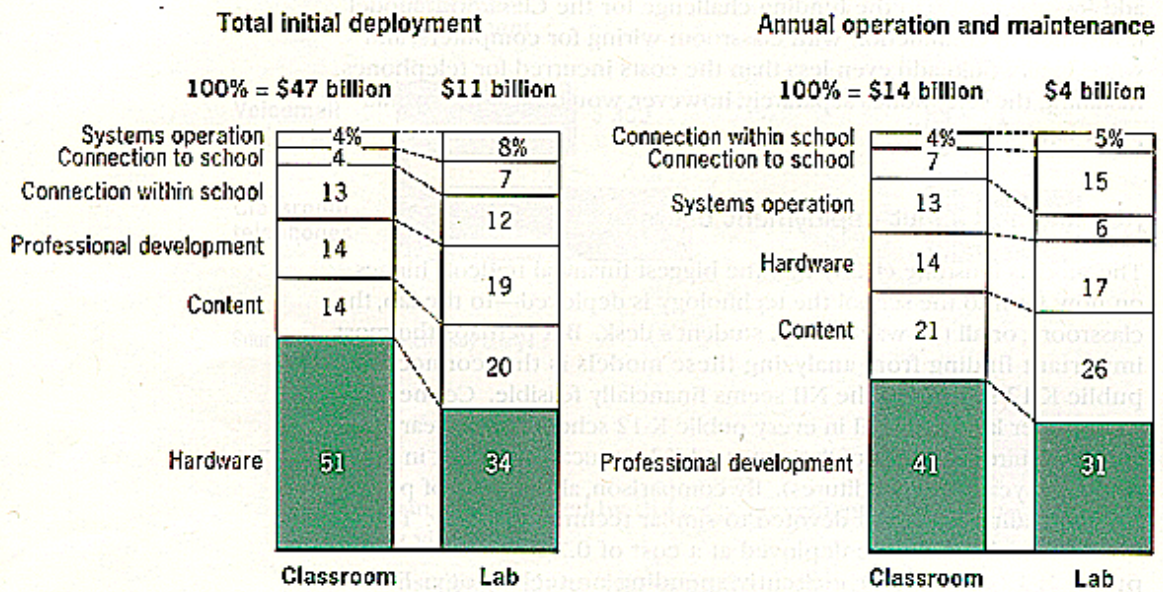
“Just as businesses over time have learned the importance of monitoring the Total Cost of Ownership of their technology investments, school leaders are paying more attention to the ongoing costs of managing their growing networks. We believe that the TCO assessment tool that the Consortium for School Networking developed with Gartner, along with all of CoSN’s TCO resources, can help school leaders understand these issues and plan their networks in the most cost-effective way.”

Exhibit 7

COST COMPONENTS

Computer-based infrastructure
Percent

Major cost drivers



Source: McKinsey analysis

Estimated Cost of Deploying and Operating Infrastructure

Q2.

TCO, alone, is a method of financial analysis. Comparing initial technology costs with ongoing annual costs is a necessary step in determining TCO. Numerous studies have differentiated the data and analyzed the cost components. Rule of thumb estimating is that hardware expenditures are one-fifth (~20%) of the TCO. One specific example graphically represented here is from the comprehensive work of the McKinsey Report. McKinsey analyzes specific data (see *Estimated Cost of Deploying and Operating Infrastructure*) showing first year deployment costs (left) versus the annual IT operation and maintenance costs (right). Focusing only on **hardware** costs of each graph shows 51% (deployment) versus 14% (ongoing) when comparing initial and TCO costs. Combining the **quantification** of District technology budgets (TCO) and the **qualification** of cost components in the McKinsey Analysis charts (above) it is easy to see **how and where** outsourcing

is feasible. This is true in both the initial deployment and annual operation and maintenance. Selecting an outside technology partner should include several key areas of expertise and experience to ensure real value and savings. The **checklists, tools, concepts, research, and resources** included in this white paper are provided to help your District evaluate needs quantitatively and qualitatively, and then point the way to real solutions. This design is intentional.

One clear theme in the big picture of school IT is that outsourcing **can be** included in best practices for educators. Districts need to be smart about their outsourcing and do their homework before forging ahead with outside IT companies. Outsourcing can become a **best practice** at your District to help accomplish your educational goals. The following questions and case study are provided to help solve your District's specific *where, what, when, how, how much, and who*.

Questions for IT Outsourcing Candidates.

1. What is the ratio of engineers and technical staff to marketing and sales in your company?
2. Can you provide references of customers that increase their business from year-to-year?
3. What percent of your business is in the K-12 industry?
4. Do you guarantee your work?
5. What are your areas of expertise in IT?
6. Who are your own business partners?
7. What is the failure rate of your installed hardware and networks vs. the industry norm?
8. How long have you been in this business?
9. What is the average length of time your employees stay with you?
10. Is your company growing and profitable?
11. Do you use internal ROI and TCO calculations and metrics?
12. If you take over our District IT inventory what happens to the legacy systems?
13. Do kind of lab and pre-install testing do you on your products you vendor?
14. Describe your software and operating system expertise.
15. How long does it take to get things fixed?
16. Are you able to train our teachers and IT staff?
17. What IT certifications do your hold?
18. How long have you been in the K-12 technology business?

Horseshoes vs. the High Jump.

It turns out that school IT is more like high jump in track and field than playing horseshoes. The athlete only scores if they clear the height. Almost clearing does not count. In horseshoes, getting close counts. In schools, IT solutions must *really* work. Almost working networks do not count. In horseshoes, the target stays fixed, but in the high jump the bar is continually being raised. In school IT, the bar is continually being raised to new standards. Still the only way to score is to successfully clear the bar. So to, is my advice for selecting outsourcing partners...**look for high jumpers** that can continually clear the bar...even as standards are raised.

3. Case Study in Value and Differentiation: VirtuCARE**Ô**

Hold the Fluff Stuff.

Living in South Florida and being the educational technology business I heard a story about an all-vendor meeting held by Miami-Dade Public Schools with required attendance by the IT

Director. All those that did business with the district attended. This sounded peculiar, getting all the players in the same room. And all the players were there...Dell, IBM, Apple, Microsoft, CCC, Jostens, plus a slough of smaller technology companies.

The meeting had a point. Something was impacting all the District's servers and no one fix it. Every company pointed somewhere else. Hardware pointed to software, software pointed to applications, applications pointed to hardware. You get the picture. Performance contracts or not, no one would take the blame, worse yet no one could fix it. With all that talent, networking gurus, software programmers, hardware experts...they had all sent their best, but no one could fix it.

Then a humble, recent Georgia Tech grad, decided she could do. She asked to see the source code for the networking modules. No one objected and would rather see someone else fail. So Jessica reviewed the source code. Quickly she found a line of code that was foreign and asked if anyone was responsible for it or knew what it was for. No answers. So Jessica, with all that corporate and District horsepower in the room, deleted the line of code and rebooted the server. With that the entire network came alive as if on queue. Amazed by the technical prowess of this young lady, she was the hero of the day. Of course Jessica Tang works for VirtuCom. The good news is this is a true story, sort of David and Goliath in the IT world.

Impact Players.

This story goes a long way to explaining VirtuCom and its flagship product, VirtuCARE™. Schools and Districts struggle with enough: budgets, student achievement, erratic parents, legislative compliance, acts of nature, finding teachers, legal liabilities, buildings and facilities, outdated textbooks, and an indifferent culture that want quick fixes. Worrying about technology should not be on the list. Thankfully, it doesn't have to be. VirtuCARE is the district's one-stop-shop for technology issues. With a single price, VirtuCom's VirtuCARE makes technology a reality for schools.

What happened in Miami-Dade and is pointed to in the *Superintendent's View* is the need for **impact players**. Jessica Tang is an impact player. But what she really represents is an **extensive, comprehensive team** of highly skilled **K-12 experts**. I emphasize team here because a VirtuCARE customer represented it this way to me. While a technology expert shows up at her District door for regular appointments, an integrated *team of talent* shows up for complex tasks, planning, engineering, and implementation when they are needed.

Teamwork.

The technology teams at VirtuCom have been carefully selected for their high-tech talent and carefully trained to provide "surround sound" like coverage. Yet, each individual represents multiple layers of skills and other impact players that are a deep set of resources working together for VirtuCARE customers. This is how the team functions and is how they work together. Together the team can have a greater impact than any individual can. By design, these talented individuals rely on each other to perform complete K-12 technology services. Having a talented team, however, is only the start.

K-12 Only.

Hiring the *best and brightest* IT staff is clearly important, but working as team in K-12 has specific requirements. Endemic to education is the focus on students and teaching. This is the

bottom line for education. Schools are in the business of teaching kids from kindergarten through high school. Any company working with schools must set their strategies, their skills, and their compasses in this direction. Failure to understand this precept is a costly mistake for a school and the company.

Herein lies the strategic and corporate alignment of VirtuCom, they work with a K-12 compass. VirtuCARE teams bring this embedded in their thinking and practice. Spending time with them and their customers will divulge this...talent is only *talent* if it is focused on these realities. For anyone working in K-12, they know these stripes are earned. Experience and history are important factors for providing real value to schools. K-12 technology brings its own challenges, requirements, and designs.

K-12 Methodologies.

VirtuCom's sole focus on K-12 has allowed it to accumulate more than expertise and experience for any District partner. It starts with *engineering*. VirtuCom's VirtuCARE engineers solutions specifically for schools. This engineering includes hardware, software, networking equipment, peripherals, software, and applications. The solutions are designed based on customer requirements, educational goals, inventory, and roadmaps for implementation.

VirtuCom methodologies start with thorough engineering and lab testing of products *before* they are offered to schools. Only the best of best products, parts, and equipment are selected after VirtuCom's own rigorous testing, of both individual components and the complete combinations of products. VirtuCom engineers and requirements are steep. Even the common brand name PC's have failure rate unacceptable to them, so they build their own PC's, and have a failure rate 3x times better than the brand name PC's.

Building Technology Roadmaps.

VirtuCom offers comprehensive IT services and products for Districts. They offer industry-best products and components, engineer the right educational solution, and provide end-to-end coverage, expertise, and money-saving experience. Most Districts require integration and full utilization of technology inventory, including legacy systems. This causes most outsourcing companies major technology problems. For VirtuCom, it is an opportunity to show why they *shine* in the K-12 business. The process includes: discovery, analysis, adjustment, and solution.

VirtuCom's discovery and diligence process determines how and what to incorporate from a District's inventory into new solutions. Then the VirtuCARE concept takes responsibility and manages the effectiveness of the entire documented inventory. There are limits of reasonableness in using and adjusting old hardware, but this process maximizing a District's available technology, extends their earlier investments, and then provides a comprehensive technology roadmap for District. While there are admonitions about putting old wine in new wineskins, this process squeezes as much life as possible out of purchased technology.

Stairway to Heaven.

VirtuCom has developed a business model that requires a serious look. Their philosophy, skill, and experience may not provide a stairway to heaven, but it is making a lot of believers out of educators as to a new way of doing IT in their District.

Overall, this inventory, analysis, and roadmapping methodology is a key way that differentiates VirtuCom and other outsourcing companies. The technical teams, specific K-12 experience, school IT database for upgrading and maintaining, significant networking expertise, and classroom understanding provide a new hope and new opportunities based on school IT. Very few companies nationally, regardless of size, can offer this comprehensive program. For their District partners it is putting **a new face** on school IT, and providing a means for improving ROI, getting a grip on total costs of ownership (TCO), and providing real educational value. Let's examine some specific ways this happening, including some views from Districts and educators, and then inside of VirtuCom. These views will provide a way to see real-time and long-term value.

Superintendent's View

The bottom line for technology in our district is that it must be reliable every day in every classroom and office. We must know that whether or not we need up-to-the minute weather station data for a math lesson, an emergency contact for a sick student or a transcript for a scholarship deadline we are certain that the data are readily at our fingertips. VirtuCom consistently provides the technical support and expertise that allows us to maintain functional computer workstations and networks.

Associate Superintendent, Dr. Nancy Baird

"The Commerce City School System enjoys the advantages of working with an outsourcing company (VirtuCom) in taking care of our technology needs. This is the most efficient and inexpensive way for us to get professional service and advice as we maintain and work to improve the technological opportunities for our students and staff."

**Superintendent Larry White,
Commerce City Schools**

New Technology. New Projects.

As an educational partner, VirtuCom provides an added-value to a relationship in many ways. They are continually on the watch for new, effective technology products that will help *their* schools. This process ranges from specific software products like leading edge classroom networking management software, to new wireless mobile labs, to helping plan all the technology of new middle school. Finding, evaluating, and buying new products is very time-consuming and expensive for a District. Managing these projects is another part of the cost equation that inhibits new projects from being done. This means that technology that can make a difference can get into school specifically because of IT partnerships. As Gartner and CoSN point out sometimes *increasing TCO* (expenditures) is the right thing to do for *improving educational ROI*.

I asked some VirtuCARE Districts the following question. How has the availability of outsourcing influenced your thinking, planning, and purchasing of IT in your district? The responses were overwhelming. New projects were done **because** of outsourcing. Some included: (1) adding COWS (computers on wheels) mobile wireless elementary labs turning every classroom in a network lab, (2) creating a new engineering lab with CAD/CAM, (3) implementing classroom networking management teacher tools on all networks to regain control of computers with problem students, (4) adding a middle school tech lab with robotics, (5) adding a new middle school with multimedia, digital production facility, and (7) adding mobile labs across Grades 6-8.

Proof of the Pudding.

The experiences with VirtuCARE are best told directly from the educators and Districts themselves. They provide a context and reality to the research and writing. Calculating TCO, improving student achievement, describing companies and engineering skills, providing new ways for schools to help themselves are all important, but nothing *provides hope and meaning* like words from a dedicated, knowledgeable educator on the frontlines of action. Surely, this describes Lori McCoy and her work at Buford City Schools.

With the rapid pace with which technology continues to evolve, Buford City Schools stays on the cutting edge by outsourcing all technology needs with VirtuCom. Through their direction and assistance we recently put into place a wireless mobile computer lab for each of our schools. Teachers now have the advantage of holding classes virtually anywhere in the building; every classroom is a potential computer lab. We feel that the wireless mobile labs inspire new ways of teaching and learning, in new environments, to help every child succeed in school. Students have the opportunity to expand their inherent creativity and become engaged in critical thinking by using these tools, and are able to function on a more individually productive level. We have had great success with the wireless computer labs and plan to purchase one for each grade level as budgets permit.

We have found that by outsourcing our technology needs we are able to focus on more important issues, such as the needs of our teachers and most importantly, the needs of our students. We have been able to stay on the cutting edge of technology and operate more efficiently without sacrificing quality by utilizing the skills and expertise that is provided by VirtuCom. With the pressure that has been put on school systems nationwide to integrate technology into the curriculum, reliable, innovative uses of it are becoming a critical ingredient in the world of education. We feel that a key component in the road to success for our students is achieved by providing them with the technology tools necessary to succeed in today's world, tools that are supplied and maintained by VirtuCom.

Lori McCoy
Director of Technology

Built-in Consultants.

A concrete measure of value to schools with IT partners is having built-in consultants for variety of activities. Many times this expertise advice comes at no additional cost to the District. In other cases, IT partners are a known commodity, and keep Districts from unnecessary expenses. One District executive under VirtuCARE, who was the IT Director at a former District that did not use outsourcing, said they spent incredible amounts of time and money on outside consultants at \$150/hr for advice that may or may not be useful. Building these relationships with outsourcing IT companies takes time, but the real value can be found in this pointed description:

The bottom line for technology in our district is that it must be reliable every day in every classroom and office. We must know that whether or not we need up-to-the minute weather station data for a math lesson, an emergency contact for a sick student or a transcript for a scholarship deadline we are certain that the data are readily at our fingertips. VirtuCom consistently provides the technical support and expertise that allows us to maintain functional computer workstations and networks.

Dr. Nancy Baird
Commerce City Schools

No Room for OOPs.

From the inside, VirtuCom and the architects of VirtuCARE seem quite normal. Looks can be deceiving. The ***always available and accountable*** attitude comes straight from the top. Sitting across from Jenny Tang, VirtuCom's CEO, one understands how a company so deep into technology and the daily hand-to-hand combat of school IT gets its vision and mission. She calls it *customer intimacy*. It sounded strange at first, as she explained her passion for schools and forging a real customer-first company, the meaning came into focus. She has plenty of evidence to back up her commitment. I spoke with some of them firsthand and know *customer intimacy* means doing business in rigorous, yet innovative way where everyone works with their head and heart.

The first lieutenants at VirtuCom are all in sync; VirtuCom is VirtuCARE. Vernon Trice, Partnership Executive, and a key evangelist and engineer of the business model, had another way to describe it. He called it a "no room for OOPs' business. Getting close counts in horseshoes, but not K-12 IT.

Educational technology is always evolving. It is a complex mixture. Always changing with a mixture of PCs, OS's, security software, student information systems, internet. IT departments are getting lost in all the new offerings as well as the costs factors. Schools focus on teaching. We help them be able to do that. In 1999, after several years in the business, we decided to put a solution package around IT. VirtuCARE was born. A service offering that is seamless with comprehensive technical services. Reliable. Easy to use. Troublefree. Before VirtuCARE, customers would use multiple vendors. We have a single price, no muss no fuss. We help by offering pain relief.

Doing More with Less.

With new requirements schools are again still faced with the same old problem. One District IT Director (not a VirtuCARE District) asked me the following questions.

How do we do more with the same amount of funding or in some cases even less? How are schools facing these new challenges? More and more schools are looking to the technology they have in place or trying new and better ways to use it. But where will the IT help and expertise come from? Additional staff? Not likely.

Since most of the IT staff are already working at **full capacity**, this means they are going to have to work smarter, not harder. They need to find ways that optimize and leverage the use of valuable resources and expertise. In a time when IT *complexity, volume, and accountability* are exponentially increasing, outsourcing and VirtuCARE sounds like a breathe of fresh air and a solid solution.

Credits and email contact:

Bud Gillan, Flying Fish, Consultants in Education and Technology. Bud was formerly IBM K-12 Science Manager and has authored numerous curriculum and software products. He has been an instructor in middle school, high school, and College of Education, Florida Atlantic University. bud13@earthlink.net

Web and Print References

<http://classroomtco.org/>

<https://k12tco.gartner.com/home/>

https://k12tco.gartner.com/home/homepagepromo/files/TCO_Overview.pdf

https://k12tco.gartner.com/home/homepagepromo/files/TCO_DataCollection.pdf

https://k12tco.gartner.com/home/homepagepromo/files/TCO_AdditionalInfo.pdf

www.classroomtco.org

<http://www.lhric.org/views/articles/outsource.html>

<http://powayusd.sdcoe.k12.ca.us/projects/NSBA/support.html>

<http://www.computerworld.com/managementtopics/management/itspending/story/0,10801,75718,00.html>

Contracting as a Mechanism for Managing Education Services (Jane Hannaway), Consortium of Policy Research in Education. <http://www.upenn.edu/gse/cpre/>