

PUBLIC EDUCATION IN THE NEW GLOBAL ECONOMY, 2006-2016

Public Education Scenarios and Policy Priorities in the State of Ohio for the Future

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State Board of Education Approved Priorities

Each year, the State Board of Education sets policy priorities for public education in Ohio. The state board-approved priorities set the context for the policy directions of the board, the state superintendent of public instruction and the Ohio Department of Education (ODE). The priorities also provide the guidance for policy recommendations to the 613 local school districts, the legislature and the governor's office.¹

The state board typically conducts a retreat each year, during which it evaluates the state superintendent of public instruction, conducts strategic planning for itself and ODE and identifies its policy priorities. In June 2006, however, the state board decided to do its strategic thinking differently than in the past. Recognizing the differences between futuring and visioning², it chose to think about the external environment for public education in Ohio well into the future before establishing a normative vision for the present.

State board members wanted to think about the broader economic, demographic, social and political trends impacting public education (and which public education in turn effects) to set a forward-looking context for policy. Further, members wanted to think about scenarios, or alternative futures, in order to understand how different futures depend upon different sets of circumstances. By considering a range of scenarios, they wanted to identify the most robust policies that would best serve the interests of public education in the state across different alternative futures.

In 2003, State Superintendent of Public Instruction Susan Tave Zelman and her staff at ODE engaged in a scenarios exercise on the future of education in Ohio. This exercise had produced a Logic Model, which conceptualized the flow of responsibilities of each major component of the public school system³. The Logic Model proved the theoretical framework for measurements of performance, compliance with federal and state education laws, and accountability of resources by ODE. (The 2006 revised version of the Logic Model appears as Appendix A.) The scenarios exercise of 2006, however, was substantially different in approach to the 2003 exercise and involved many more participants, including almost all of the members of the state board.

This paper documents the organization, method and results of the scenarios exercise that occurred at the State Board of Education retreat at Salt Fork State Park Lodge from June 11 through 13, 2006. The scenario exercise, including both generating the scenarios and deriving the board policy priorities from them, required about 80 percent of the available time of the retreat. At one time or another, 17 out of 18 board members and nine individuals from ODE, including Dr. Zelman and her senior staff, actively participated.⁴

Topic Question and Method

The scenario exercise began with the topic question "What are or will be the most important trends or issues determining student achievement in Ohio from 2006 to 2016?" This question guided the exercise from the beginning of the scenarios to the end of the board-approved priorities. The scenario method used was the intuitive scenario method popularized by Shell, SRI International and GBN.⁵

Identification of the Most Important Trends and Issues

The state board sat as an expert focus group, facilitated by board member and professional futurist Dr. Steve Millett with the help of ODE staff. The board began the scenario exercise by identifying the most important trends or issues relative to the topic question to be considered in the scenarios. Using semi-structured brainstorming and going around the room with one person contributing one idea per round, the board generated a list of 67 trends or issues in response to the topic question. (For the full list, see Appendix B.)

The 67 trends or issues were widely scattered in topics and specificity. Some trends involved basic state demographics, including the aging population, the heavy emigration of young adults out of the state, and increasing diversity. Several trends touched on the theme that the state is growing, but very slowly, and that Ohio is losing its ranking in economics, among other variables, to other states, especially the high-growth states of California, Texas, New York, Florida, Illinois and Pennsylvania. Board members are particularly aware of how some states, like North Carolina, have successfully repositioned their state economy from traditional manufacturing to high technology industries. There was a general feeling among members that Ohio enterprises, schools and students have not kept up as well as they should with changing technologies and global economic competition. In addition to the demographic and economic trends, many familiar issues involving school finance, taxes, teacher quality, school safety, etc., arose.⁶

Dr. Zelman participated in the process. Although she was just one person among many, she spoke enthusiastically about the globalization of education and its close ties with economic growth, quality of life and democratic societies. She pointed out Ohio needs to compare its educational system not just with other states of the U.S. but also with other countries, where students typically outperform American children in mathematics and science. Prior to this strategic retreat, Dr. Zelman had briefed the state board on her tours of education in China and India.⁷

There was much discussion about innovations in the public school system. The board had already established task forces to look into potentially significant changes in secondary education and in early childhood learning. The board members also showed a continued commitment to exploring new ways to finance public education.

Moving rapidly for the sake of limited time, board members were asked to vote for just three out of the 67 trends or issues that they thought were the *most important* and three that they thought were the *most uncertain*. The most important trend or issue turned out to be "expectations for educational achievement," those of the *No Child Left Behind* (NCLB) act, state law, standards set by the State Board of Education, and the broader expectations of parents, schools and society. The most uncertain trend or issue was the impact of "globalization," or the new global economy on Ohio. Just how extensive and profound would the impact of global business, trade, investments and competition have on the state, both positively and negatively?

Scenario Structure

Using the two most important trends and issues, a quadrant was created with the axes of expectations and globalization, with the poles identified simply as "high" and "low" relative to each trend/issue. The four quadrants were 1) high globalization and low expectations, 2) high globalization and high expectations, 3) low globalization and low expectations, and 4) low globalization and high expectations (as shown in Figure 1). Board members divided the participants into four discussion groups, one for each quadrant (scenario). Their instructions were to determine whether the net effects of the new global economy would be positive or negative and what role public education would have in Ohio. They also were tasked with identifying the future state of education in each scenario. The participants were requested to work in as many of the 67 trends or issues from the previous brainstorming session as they could, within the very limited time available.



Figure 1. The two axes and four quadrants of the scenarios structure.

Four Scenarios

As reported out by the four working groups, the scenarios are briefly summarized below.

- **1. High globalization and low expectations.** This scenario was further identified as *"The world passes us by."* The world will continue to evolve toward a highly interconnected global economy, but the net impacts for Ohio will likely be largely negative. The state will endure further declines in manufacturing due to increased outsourcing to other states and countries with lower labor costs. Increasingly, services (such as service centers, databases, financial and major medical care, etc.) will be outsourced abroad, too, due to more competitive value elsewhere. Agriculture will likely survive as a major industry, but agricultural employment will continue to decline. As Ohio continues a general economic decline begun in the early years of the 21st century, jobs will be lost, unemployment will increase, and tax revenues and government services will decline. Major industries and businesses will likely be owned by foreign companies and investors, with foreign corporations bringing some factories and businesses to Ohio to gain proximity to Eastern and Mid-Western American markets.
- Students from Ohio schools will face fewer well-paying jobs at home. They will be attracted to better opportunities elsewhere, or they will have to settle for what will be available locally. People will not understand how the economy of Ohio declined, and they will have low expectations for jobs and careers, for themselves and for their children. The middle class will slowly erode, with a general polarization of socio-economic classes into lower and very wealthy classes. Low expectations in the state economy will be reflected in low expectations for educational achievement by schools and students (or, "What's the use?"). In this climate, NCLB will either lapse or be largely ignored. Low expectations for public schools will lead to low educational performance, which in turn will further denigrate the perception of Ohio school and student quality. Ohio will be seen as a backward state. There will likely be an increase in private and public community schools with particular niche markets. Public schools, however, will likely decline further in financial health, community support and global respect.
- In this scenario, state education policy seems more academic than practical and the State Board of Education and ODE will likely exercise little public influence, let alone leadership.
- **2. High globalization and high expectations ("Ohio: The Center of It All").** In this scenario, the net effects of the new global economy are generally positive for Ohio's economy and public education system. Investments in new technologies and enterprises will pay off well. In addition, foreign corporations and investors will bring major new sources of capital to Ohio. Even with lower tax rates, the booming economy will generate ample state tax revenues to support many public services and infrastructure, including public education. Ohio will be a player in the new global economy and will reverse the slow downward economic and social spiral of the early years of the 21st century.
- The society of Ohio will become increasingly diverse due to foreign companies locating in Ohio and increased immigration. Ohio will again, much like a hundred years ago, emerge as a multi-cultural society, although the cultures will be more Latin American, Asian and African rather than European. The diversity of Ohio's population will create tensions, including strains in the educational system, but these tensions will be channeled in positive ways.
- Public education in Ohio will emerge as a model for other states and countries to emulate. Strong economic growth will generate more revenues for education. Educational leadership will be prepared to spend the money wisely on curriculum and teaching innovations and systemic re-engineering. For example, teacher quality will improve, mentors will provide guidance to students and the school calendar will be lengthened to provide more time for key courses, such as those in languages, mathematics and science. The state will institute a vigorous program of early childhood education, including pre-schools and all-day (everyday) kindergarten.
- In this scenario, the State Board of Education and ODE will provide long-term vision and leadership for educational alignment with the new global economy. Students will be better prepared for value-added jobs in industry and business as well as better prepared for post-secondary education. Communities, including businesses, will take an active interest and participative role with teachers and school administrators in the workings of the schools. There will be more internships with companies. Schools will generally become both better financed and better managed. People will set high expectations for schools and for student performance, which will be largely met and rewarded by society.
- **3. Low globalization and low expectations ("Ohio: The Armpit of It All").** In this scenario, unlike the first one, globalization does not evolve as expected with shifts to local, national and regional economies rather than a primary global economy. Ohio may participate in regional economic networks, but it will be largely untouched by globalization (even if it were to occur). Foreign corporations and investors will likely move out of Ohio to more competitive areas. Chinese companies, following the example of the Japanese some 40 years ago, will look at Ohio for sites for future plants, but go elsewhere. Immigration into Ohio will likely decline and emigration of young people out of Ohio will continue to increase. Ohio will become increasingly introspective and insular. People will be far more interested in their local daily routines and not much interested in world affairs.
- The low level of globalization in Ohio might be caused by severe immigration restrictions, public fears of acts of international terrorism (creating a new type of xenophobia), unfair trade rules and restrictions that hurt Ohio industries and labor, increasing price and tax burdens on local coal and electricity generation due to restrictions on carbon dioxide emissions by national and international entities to mitigate global climate change, unbalanced exchange rates for the dollar, a lack of foreign investment, and a growing sense of local and regional pride (such as "Ohio First"). Employment may stay steady or even slightly increase, but there will likely be a growing gap between high-paying jobs with good benefits and low-paying jobs with few, if any, benefits.
- Low expectations for education will be fully realized. With low globalization, there will be a general satisfaction with things as they are and people will not generally see the value of a superior education. Graduation rates at high schools will decline. No real achievement gap among Ohio students will be apparent because nobody really expects much from any students. Benchmarking with students and educational systems in other countries will seem irrelevant to Ohio. Funding for schools will decline and no one will much care. Schools will become more important for their activities and sports than for their academics. There will likely be a growing interest in vocational education, for relatively low-technical industries, that leads directly to satisfactory employment. Because so little is expected from public schools, home schooling, private schools and community schools will exist for those with particular preferences for a particular type of education not offered generally in the public schools. Students who receive a superior

education are relatively few and uniquely motivated; they typically will move out of state to better paying jobs and careers rather than remain in Ohio.

- As in the first scenario, the State Board of Education and ODE will not be expected to raise expectations or change the status quo. There may be no need for the state board at all. Public education policy will likely move to the local districts, where there will be great variations in school spending, student requirements and educational performance. There will be little or no leadership in educational innovations.
- *4. Low globalization and high expectations ("Independent and Happy").* In this fourth scenario, Ohio will largely ignore the opportunities to become part of the network of global industries and enterprises in favor of its self-initiated economic development. An attitude emerges that "I'm from Ohio and proud of it!" The Ohio economy could grow even without globalization. (Through three of the four scenarios, there was an underlying assumption that globalization will lead to new enterprises, jobs and business opportunities, which in turn would generate strong economic growth in Ohio, but the fourth scenario challenges this underlying assumption.) The possible causes for low globalization would be substantially the same in this scenario as in the third scenario, but it also might be caused by more local investments, public-private sector cooperation in job programs, and less dependence on imported oil in a new era of renewable energy sources, by which Ohio and the Mid-West could become almost energy independent because of synthetic fuels, clean coal and fuel cells. In addition, the percept of threat from terrorism will greatly decline.
- Unlike the third scenario, there will be high expectations of schools and students for educational achievement. A pride in Ohio will become a source of new public concern about academic quality. State standards will exceed those set by the federal government. Expectations will be higher for all categories of students, so that performance will approach universally high achievement. Ohio will engage in curriculum innovations and educational process re-engineering. Public schools will thrive and drop-out rates will decline. Early childhood learning will be widely practiced. Children will generally be well-prepared for each stage of public education from pre-kindergarten through post-secondary education. Educational productivity, like industrial productivity, will greatly increase due to improved processes, value-added labor and technologies.
- The State Board of Education and ODE, in close cooperation with school districts, will provide strong leadership and emerge as thought leaders in educational innovations. Ohio will become a model for other states and other countries in achieving remarkable results within a well-managed educational system.

Emerging Themes from the Scenarios

The members of the board greatly enjoyed the scenario exercise. They took an hour to share their thinking about all four scenarios, and the discussion and questions were particularly insightful. Seven major themes emerged from the consideration of all four scenarios:

1. Expectations, and the accountability that goes with them, are indeed a major driver of future student performance. There must be an alignment of what NCLB and the state expects in standards, state model curriculum, teaching in the schools and testing.
1. Globalization, or the new global economy, is perhaps the single most important driver of the future economic health of Ohio. How well the Ohio economy performs to a great extent determines the resource base and societal needs of this state. Conversely, improvements in the educational system could contribute much to globalization and economic growth in Ohio.
1. Leadership – board members need more examples and understanding of how to exercise leadership in both the new global economy and education. It begins with the State Board of Education and ODE – neither can afford to be passive and wait until others explain their mission to them.
1. People generally "don't get it" – many people cannot see what is happening to the economy of Ohio and do not see the impacts of industrial outsourcing, competition, failed businesses, etc. There are still people who expect the large steel mills of northeastern Ohio to reopen some day.
1. Ohio needs a strong sense of community with shared values, strong relationships and mutual cooperation to achieve educational and economic goals.
1. Economic growth – if Ohio doesn't get the state economy growing faster than it has, the state is going to continue to fall behind others and become an international backwater.
1. Alignment of the educational system with the "real world," meaning that Ohio has to revise the curriculum and teaching to make content more relevant to the needs of employers and post-secondary education.

It might be further added that Ohio will likely have to provide highly educated, skilled and value-added workers to employers of all types in the future. Ohio does not want to have to compete internationally on low labor prices; rather, it would rather compete on value-added labor based on productivity and uniqueness. Therefore, the Ohio education system has to produce students who are equally well prepared for both post-secondary education and employment in a rapidly changing economy and society. In addition, the state board recognizes that strong schools attract families, investors and companies to Ohio. Technology, in addition to labor, is a key to the future economic prosperity of the state. Innovative new technologies must emerge from the educational system, industries, independent laboratories and entrepreneurs.⁸

Generating Policy Priorities from the Scenarios

Next, the participants responded to the topic question "Considering all four scenarios, what can the State Board of Education do to contribute the most to student achievement in Ohio from 2006 to 2016?" This was a way to get from the macroscopic level of the scenarios down to the particulars of deriving the board policy priorities. Using the nominal group technique, the participants generated 41 ideas in response to the topic question and voted on them (see Appendix C). The top 10 ideas were, in rank order:

1. Create high educational expectations for Ohioans in light of a globally competitive economy – Ohio needs to produce world class students
2. Establish an effective early childhood education system – the state board needs to take leadership in the design of such a system and in putting together partnerships to implement it (what the board refers to "getting it right in the beginning")
3. Continue working closely with institutions of higher education to ensure better teacher preparation and alignment with the changing educational system in Ohio
4. Reassess academic standards to build more relevance to globalization and the changing needs of society in "the real world"
5. Engage business, government and others in strategic conversations and collaborative initiatives about Ohio's future and the role of education in Ohio's economic future
6. Develop standards and best practices for a process of individualized student instruction
7. Expand and promote data availability and analysis to guide the improvement of student achievement
8. Implement models for differentiated educator/teacher roles and performance-based pay
9. The state board must take a thought leadership role on globalization and the changing economy in Ohio and the role of education in it
10. There must be accountability with rewards and penalties for meeting or not meeting expectations for education performance.

The participants at this stage broke into two discussion groups to compare this top 10 list with last year's board priorities and with the drafted recommended priorities prepared by ODE staff. The two groups worked separately, but they came up with remarkably similar results, such that the board had to debate only one priority to achieve consensus. The final six priorities were as follows:

- Identify and remedy low academic performance
- High achieving middle and high schools
- Educator quality and capacity
- Modernization of school funding and resource management
- Early childhood learning
- Education in the new global economy⁹

The first priority was a re-affirmation of a priority from previous years. Ohio, independently of NCLB, has long been committed to the goal of universal achievement for all students at the highest possible level. In the language of NCLB, the board was committed to closing the achievement gap, but members were becoming increasingly sensitive to the needs of under-achieving students regardless of race, ethnical background, or any other social or economic characteristic. Students from all parts of the state and all types of families may suffer from any number of disadvantages or learning challenges, which the board must address so that all students have the opportunity to learn and do well in school. Some state

board members would go so far as to advocate Individual Education Plans (IEPs) for all students, not just those with special needs for whom such plans are required by law.

The second priority also was a carry-over from last year, but it was worded differently with a new point of view from the scenarios exercise. High achieving middle and high schools must have curricula and standards that are relevant to "the real world." The state board members realized that it needed much more input from industry and business leaders than it had enjoyed in the past. Therefore, the board recognized that it had much more to learn about the future needs of students, society and the new global economy to make sure that model curricula, courses of study, and educational standards will be aligned with them. A consensus emerged that the board needs to take a hard look at existing curricula and standards and to start revising them with broad inputs from around the state.

In 2003, the state board had commissioned a task force on reforming high school education. Its work was continued by a committee of the state board. Many of its recommendations were supported by Governor Bob Taft and resulted in the passage of the Ohio Core curriculum for high schools in 2006. The work of reforming high schools, however, has just begun with many systemic innovations still needed to better prepare students for post-secondary education and employment. The work of innovating middle schools has barely begun.

Likewise, the third priority was carried over from previous years, but it was worded differently than before. Teacher quality is not just an educational ideal – it must be relevant to the needs of students, society and the economy. A new emphasis was placed on what the state board and ODE could do in cooperation with universities and teachers' organizations to better prepare teachers to cope with the demands of the future. Furthermore, the board needs further growth in the knowledge and skills of educators at all levels beyond just classroom teachers.

The fourth priority was a combination and rewording of two previous state board priorities. It emphasized the need to not only generate more revenues for public education, but to learn how to manage resources more efficiently. There was a point of view that the voters of Ohio are not likely to approve higher property taxes for more public education if they believe that they receive poor value in return. To promise better results if first given more money is an educational argument that will not likely sway the public. Therefore, results have to be shown first to encourage the people to want to invest more tax dollars in education as a good value. The state and the individual school districts cannot do more with less doing things the same way as in the past. With limited resources, the educational system has to innovate to become more effective and more efficient. However, the state board and ODE make recommendations on state educational budgets, but they do not have the fiscal powers of the state legislature or the local district boards of education.¹⁰ Nonetheless, the state board and ODE must exercise thought leadership to stimulate systemic changes. Increasing school resources and spending money more wisely is a tightly bundled objective.

Early childhood learning appeared as a board priority for the first time in 2006. The board had commissioned a task force called the School Readiness Solutions Group in 2005. It released its report and recommendations in 2006 and followed up with a special committee of the state board to derive details of implementation. The premise is that children learn from birth and that they can have learning experiences that prepare them to be successful by age six in kindergarten and subsequent grades. The earlier a child begins formal learning, the more the child can learn. Early childhood education is the starting point for aligning the educational system in general with the new global economy recognizing that other countries start children at earlier ages and push their educational progress harder in primary education than typical American schools do.¹¹

The sixth priority also was new in 2006, and was a direct result of the scenarios experience. State board members acknowledged that they must provide thoughtful leadership and go out and seek the inputs and active cooperation of industries, businesses, communities and political leaders in the educational system in order to stimulate further economic growth in Ohio.

Results of the Scenarios Exercise

The strategic retreat and the scenarios exercise of the State Board of Education in June 2006 led directly to several results, as follows:

1. **State Board of Education Priorities for 2006-2007.** A mission of the strategic retreat was to generate a list of policy priorities for the state board for the forthcoming school year. This mission was accomplished with more substance, consensus and enthusiasm than expected. The state board formally approved its policy priorities at its meeting in July 2006 and the department began to disseminate them. Not satisfied with just generating a list, state board members committed themselves to continue exploring these priorities and making sure that they were translated into actionable items for both the state board and ODE.
1. **Continued Innovations by the State Board.** In addition to setting its annual policy priorities, the state board pushed several activities toward completion that it had already initiated due to a new sense of commitment generated by the scenarios exercise. The work on high school reform advanced to legislative enactment with the passage and signing in December 2006 of the Ohio Core, which created higher expectations for high school graduates. The School Readiness Solutions Group completed its work in August 2006 with a formal report and set of recommendations. State board leadership created a follow-up committee of the board to translate those general recommendations into specific executive and legislative steps. The committee continued its work into February 2007 and completed a detailed plan that will be submitted to the new governor of Ohio (who had supported early childhood learning in his campaign) and the state legislature.
1. **Benchmarking Ohio with other Countries.** Dr. Zelman had already wanted to do a study that would benchmark Ohio with other countries, many of which are competing with the goods and services offered by Ohio. The scenarios exercise gave her further encouragement to seek private funding for a formal benchmarking study undertaken by the leadership of Michael Cohen of Achieve and Sir Michael Barber of McKinsey. They presented their preliminary findings to the state board in December 2006 and followed up with a formal report and final presentation to the state board in February 2007.¹² The new leadership of the state board decided in early 2007 to form a subcommittee with the explicit task of evaluating the report and making actionable recommendations for next steps to the state board. The subcommittee will hold 12 outreach meetings across the state to disseminate the Achieve report and to solicit public comments and suggestions for implementation. The scenario exercise of June 2006 created a mood with the state board that it must learn more about international education and how it impacts economic growth so as to apply best practices in Ohio.
1. **Creation of a Study Group on Education and the International Economy.** Dr. Zelman also proceeded to raise private funds for a study group on education and the new global economy. In November 2006, she initiated an International Education Advisory Committee to plan an all-day conference on this topic scheduled for April 26, 2007. The goal of the conference is to increase awareness among selected public opinion leaders and groups to the need to integrate school systems with the new global economy. It is expected that a formal task force, following the positive results generated by the high school and school readiness task forces, will be formed in the summer of 2007 to explore trends, issues and recommendations that will eventually go to the governor and the state legislature.

Next Steps for the Scenarios

In addition to the items mentioned immediately above, the members of the state board realize that they have much work still to do with the scenarios. While the scenarios have been very influential in the thinking of the state board and ODE, they have not been disseminated publicly. The state board feels strongly that the scenarios should be shared with educational and community leaders across the state. It encourages the local school district boards to have their own strategic retreats and their own scenarios to think further about how to align themselves with the local realities of the new global economy. The state board can implement state policy in cooperation with the governor and the legislature, but only local districts and schools can perform the day-to-day operations of educating Ohio's students in order to improve their life-long quality of living and to prepare them for successful jobs and careers in the future.

References

- 1. In the State of Ohio, the State Board of Education is a non-partisan and independent body. It hires and exercises responsibilities for the state superintendent of public instruction and the Ohio Department of Education. Since 1999, the state superintendent has been Susan Tave Zelman. Although she reports to the State Board of Education, Dr. Zelman also sits on the governor's cabinet and works closely with his office and the state legislature. The state board consists of 19 members, 11 of whom are elected within designated districts and eight of whom are at-large (appointed by the governor). Each board member serves a four-year term, with eligibility for a second consecutive four-year term. The state board elects its own officers every two years. Further information may be found at www.ode.state.oh.us.

- 2. Stephen M. Millett, "Futuring and visioning: complementary approaches to strategic decision making," *Strategy & Leadership*, Vol. 34, No. 3, 2006, pp. 43-50.
- 3. The Logic Model may be found at www.ode.state.oh.us. Also see Stephen M. Millett and Susan Tave Zelman, "Case study Scenario analysis and a logic model of public education in Ohio," *Strategy & Leadership*, Vol. 33, No. 2, 2004, pp.33-40.
- 4. The 17 members of the State Board of Education who participated were:
 - Richard E. Baker
 - Virgil E. Brown, Jr.
 - Michael Cochran
 - Jim Craig
 - Colleen Grady
 - Lou Ann Harrold
 - Robin C. Hovis
 - Stephen M. Millett
 - Eric C. Okerson
 - Deborah Owens Fink
 - Emerson Ross, Jr.
 - G. R. "Sam" Schloemer
 - Jane Sonenshein
 - Jennifer Stewart
 - Sue Westendorf
 - Carl Wick
 - Martha W. Wise
- At the time of the strategic retreat in 2006, there was a vacant seat on the State Board of Education, with 18 sitting members of the state board. One board member missed the strategic retreat for extraordinary personal reasons.
- ODE leadership and staff directly involved with the scenarios exercise included Susan Tave Zelman, Mitchell D. Chester, Marilyn Troyer, Catherine Clark-Eich, Matthew DeTemple, Stan Heffner, Paolo DeMaria, Matthew Cohen and Alyson DeAngelo. In particular, Dr. Millett recognizes the assistance of Ms. DeAngelo, and thanks her for her help with the preparations for the retreat and for taking notes of the many discussions from which much of this material was taken.
- 5. For discussions of scenario methods, see Bill Ralston and Ian Wilson, *The Scenario-Planning Handbook. A Practitioners' Guide to Developing Strategies in Uncertain Times* (Mason, OH: Thomson South-Western, 2006); Stephen M. Millett, "The future of scenarios: challenges and opportunities," *Strategy & Leadership*, Vol. 31, No. 2, 2003, pp. 16-24; Stephen M. Millett and Edward J. Honton, *A Manager's Guide to Technology Forecasting and Strategy Analysis Methods* (Columbus, OH: Battelle Press, 1991), pp. 65-72; Peter Schwartz, *The Art of the Long View* (New York: Currency Doubleday, 1991 and 1996).
- An excellent example of the scenario method applied to education is provided by the Centre for Educational Research and Innovation, School for Tomorrow, *Think Scenarios, Rethink Education* (OECD, 2006), which may be found at www.sourceoecd.org/education/9264023631. "Scenarios" have several meanings, but the meaning used here is the one that describes alternative outcomes of trends and issues that are internally inconsistent but significantly different from each other by a target date in the future. The scenarios reported in this paper are static descriptions of alternative futures with little or no regard to possible sequences of events that lead to such futures.
- 6. The participants had at their fingertips some trends information supplied by ODE staff and they benefited from various degrees of knowledge and experience with the trends and issues. Some participants qualified as experiential if not analytical experts on specific topics. Because of time constraints on the exercise, judgments were made based on the information at hand at that time. A thorough analysis would have included extensive trends analysis and fact sheets to support the judgments made. Therefore, the scenarios themselves must be viewed as tentative and hypothetical based on the circumstances at the time they were generated. To one degree or another, all scenarios are such.
- Further information on Ohio demographics, economics and education can be found at Office of Strategic Research, Ohio Department of Development, *Gross Domestic Product of Ohio* (November 2006), www.odod.state.oh.us/research; the U.S. Census Bureau, *Statistical Abstract of the United States* (published annually and available at www.census.gov/statab/www/); and the Ohio Department of Education, www.ode.state.oh.us.
- 7. Dr. Zelman and the members of the State Board of Education were particularly familiar with ideas expressed by Thomas L. Friedman, *The World is Flat: A Brief History of the Twenty-first Century* (New York: Farrar, Straus and Giroux, 2005). Several of the participants were very aware of economic trends in Ohio, including Dr. Millett, futurist; Sue Westendorf, president of the State Board of Education and former director for economic development in northwestern Ohio; Emerson Ross, retired executive from Owens Corning in Toledo; and Dr. Deborah Owens Fink, a business professor at the University of Akron.
- 8. For example, see Stephen M. Millett, "Ohio Science and Technology in the Future," The Ohio Academy of Science, *Heartland Science, Future Horizons*, 2005, available in hardcopy and online at www.ohiosci.org.
- 9. See the Ohio Department of Education, State Board of Education, Web site: www.ode.state.oh.gov. The priorities also appear in many hardcopy forms, including "2006-2007 Strategic Plan Highlights" (ODE three-fold brochure, December 2006).
- 10. The Ohio Department of Education administers the state budget for education. The budget is passed by the legislature and signed by the governor. The department currently administers about \$10 billion a year, including federal funds that pass through the state. This is more than half of all dollars spent on public education in Ohio. The local school districts, which have the power to place tax levies on local ballots, spend about 45 percent of the total expenditure on public education in Ohio.
- 11. The School Readiness Solutions Group of the State Board of Education, *From the Beginning. Firm Footing for Children, Families & Schools* (Columbus, OH: August 2006). Also see www.schoolreadiness.ohio.gov.
- 12. "Creating a World-Class Education System in Ohio," Achieve, Inc., 2007. Also available at www.ode.state.oh.gov.
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Appendix A

The Logic Model

Appendix B

Master List of the Most Important Trends and Issues

- 1. Aging population, especially the fact that aging people generally do not support increased taxes for education
- 2. Competition for services between children and aged
- 3. Aged staying in Ohio
- Staying in workforce longer
- Supporting grandchildren
- 1. Lower paying jobs, less family income, less wealth
- 5. The "underground economy"
- 6. Greater division between "haves" and "have nots"
- Great growth in super rich
- 7. Inter-generational passing of wealth
- 8. Students and technology (computers, Internet, cell phones)
- 9. Multi-tasking
- 10. Families need access to digital technology
- 11. Graduates who cannot read and do mathematics according to needs of employers
- 12. Expectations need to be higher for student achievement
- 13. Brain drain out of Ohio (young adults)
- 14. Ohio is not attracting very many people from the outside
- What attracts people?
- 15. Jobs, opportunities in Ohio
- 1. Companies moving out of Ohio
 - Labor laws
 - Recruiting
- 17. People don't understand education system
- Don't understand requirements and expectations
- 1. Drug and alcohol abuse
- 1. Globalization
- 1. Reprogram teachers, use methods that work
 - Process re-engineering
- 1. Trend in more drop-outs
- 1. More, better technology in education system
- 1. Competition in educating with traditional public schools
- 1. Special needs students increasing
- 1. Teacher quality
- 1. Growth in exurbia, the residential region beyond suburbs
- 1. Teacher pay
- 1. Funding for education
- 1. Efficiency /effectiveness of resources and results
 - Cost: benefit
- 1. More resources needed
- 1. English as a second language students
- 1. Early childhood learning (prekindergarten)
- 1. Support of parents/extended family
- 1. Support of community
- 1. Art and music in schools and physical education
- 1. No Child Left Behind Act
- 1. Wellness issues – obesity, lack of exercise, nutrition

1. Students empowered in lifestyle knowledge
1. Education funding system
 - More transparent
1. Growth in medical/healthcare careers – connecting to education
1. Competition for public funding
1. Better-educated population (to help alleviate dependence on Medicaid)
1. Private funding for education
 - Business
 - Personal
1. Student motivation
1. Relevance of curriculum to students (as perceived by students) – real world
1. Career expectations – leading to next stage
1. Climate of the state for taxation, regulations, etc. (What are different factors that attract or deter populations and businesses from coming here?)
1. Deregulation
1. Education as a tool to attract outside businesses
1. Quality of life issues
1. Investment in education
1. Better networking of public and private sectors
1. Marketing career-technical
1. Model of how students learn
1. Accountability
1. Workforce development
1. Educate for the market, not the education system
1. Intervention programs – individualization
1. Diversity of student populations
1. Meeting individual learning needs
1. Contracts
1. Getting it right the first time – quality management in education
1. Processes of effective learning
1. What Ohioans allow in work environment – culture disconnect
1. Length of school day/year – calendar issue, time on task
1. Mathematics specialists
1. Measurement systems for kindergarten gaps

Appendix C

Ideas generated in response to the topic question: "Considering all four scenarios, what can the State Board of Education (SBOE) do to contribute the most to student achievement in Ohio from 2006 to 2016?" with results of voting (number of votes/points received).

1. Focus on providing materials and staff development on problem-solving and critical thinking on a daily basis – 2/9
1. Participate in regional board meetings on scenarios – Ohio School Boards Association (OSBA), high school principals, regional service centers; opportunities for workshops – 2/6
1. Engage public business, government, etc. in strategic conversations and collaborative initiatives about Ohio's future and role of education in Ohio's economic future – 7/18
RANK: 5
1. Create high educational expectations for Ohioans in light of a globally competitive economy – system of constant learning birth to death – world class students – 12/48 RANK: 1
1. Fund students not schools – let the funding follow the students – 6/13
1. Develop/adopt assessments to measure world class standards – 2/3

1. Streamline process for non-traditional candidates teaching in public schools and add incentives – 5/12
1. Make birth – grade 20 (graduate/professional school) a seamless, coordinated education system – 3/12
1. "C3A2" – creative communication and collaboration to drive academic achievement – 3/14
1. Work with local districts and parents to create a favorable impression of school by young children – 0
1. Lengthen school day and school year (LSDSY) – more time on task – keep momentum – 5/14
1. Establish effective early childhood education system; leadership in design of early learning and develop partnerships in implementation – 10/30 RANK: 2
1. Raise awareness for and create understanding of the need for change – help people get it – 2/7
1. Ensure access to quality learning experiences to all Ohio students – curriculum, technology; teacher training to incorporate technology – 3/13
1. Increased authority by SBOE over local curricula – delivery and content – 1/4
1. Develop standards/best practices for a process of individual instruction – IEP for every student; including end-of-course exams; enhance identification of individual learning needs – 8/17 RANK: 6
1. Reassess and redesign academic standards to build in *relevance* to globalization, "real life" – make career exploration part of every student's high school experience – performance-based presentation on career choice part of high school graduation requirements – 6/20 RANK: 4
1. Implement models for differentiated career roles and pay for teachers – including performance-based pay – 5/17 RANK: 8
1. Continue working with Institutes of Higher Education (IHEs) to ensure better candidates – fewer, better; alignment with K-12 standards (option is to close all educator preparation programs, rewrite standards, bid out with RFP) – 6/20 RANK: 3
1. Expand/promote data availability and interpretation to guide improvement of student achievement through Data Driven Decisions for Academic Achievement (D3A2) – 7/17 RANK: 7
1. Provide opportunities for teachers to connect with real world – 0
1. Teach kids how to learn instead of teaching them a bunch of stuff – teach tools rather than content – 0
1. Develop policy framework for efficient and effective resource allocation tied to high academic achievement – models; cost-benefit issue; more flexibility – 5/11
1. Work collaboratively to set up a student-centered prekindergarten through grade 20 system where students take ownership of own learning – 1/5
1. SBOE take a thought leadership role on globalization and changing nature of the economy in Ohio and the importance of education in it – 7/16 RANK: 9
1. SBOE getting into business of issuing teacher contracts for high need schools – "state employed teachers" and statewide collective bargaining – 1/2
1. End collective bargaining in collective issues – 1/2
1. Accountability – rewards and sanction, incentivize; Local Report Cards to include explanations of failures; feedback from graduates – 5/16 RANK: 10
1. Redesign grades 11 through 14; reduce or eliminate barriers – 2/5
1. Incentivize business participation in education with tax credits to businesses – 1/1
1. Incorporate ethics into curriculum – 0
1. For larger (urban) districts, redesign role of central office requiring the districts to manage a portfolio of schools based on market-based principles; use technology, fewer personnel – 0
1. Break up large urbans into smaller schools – 1/1
1. SBOE help build capacity of local school boards – 0
1. Assure that resources/funding is adequate; power to raise funding; strategies of resource allocations – 3/14
1. Develop better model for professional development – 3/8
1. Close the achievement gap – 1/5
1. Create a framework that encourages, supports and rewards innovation – 0
1. SBOE must establish collaborative relationship with new governor and General Assembly – 4/10
1. Districts should pay for college remediation courses – "money back guarantee" – 0
1. Non-academic barriers – report on report card, safety, wellness, etc. – 0