

HARNESSING THE POWER

***TECHNOLOGY FOR SOCIAL GOOD
CAPITALISM FOR THE COMMON GOOD
INNOVATION FOR EDUCATION
PEOPLE FOR THE FUTURE***



OPEN EDUCATIONAL SERVICES FOR ALL

A CALL TO ACTION

***A Strategic Vision for Providing
Free Universal Online Educational Services
And a Plan for Getting There***

THE PLAN



***YES WE CAN
AND HERE'S HOW***

VERSION 1.2.2

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Notes

This is a plan to provide **Free, Universal, Online Educational Services**. This is a public document, so you are welcome to share it with whomever you wish. This plan is the result of conversations with thousands of people and organizations over many years, and it will continue to evolve. The most recent copy of this plan will always be available on the Stargazer Foundation Web site (www.Stargazer.org) under “Open Educational Services.”

In addition to feedback on the ideas in this plan, as well as additional ideas, we would welcome your support in this campaign – a Campaign for a Cause, not a Candidate. One of our goals is to assemble a broad cross-section of national leaders to promote the concepts in this plan, even if not all of the specific ideas. You can play an important role in spreading the word.

The purpose of this campaign is to foster a national conversation on the **quality** and the **equality** of our educational system in our technologically evolving society. The learning tools and technological infrastructure are available today to improve both teaching and learning. While there is certainly a role for government, all of us and all of our companies and organizations can play a significant role. All it takes is the will to contribute and to collaborate. Fully implemented, this plan will help address the challenge of providing a quality and an equal educational opportunity for all of our children.

Like any campaign, it needs endorsements, supporters, contributors, and volunteers. It needs people like you to promote these ideas by sending them to people and organizations you know. It needs you to recruit others. It needs your company’s help and support. Anybody, and any company, school, group, organization, or government entity, can play a role. We must all work together on this, for we have no alternative. Our children’s future is at stake.

Thanks, in advance, for joining the campaign. Your support can make a difference.

Preface

One of the most important lessons that I've learned in my more than 40 years of working on issues relating to use of technology is that we all must think bigger. Not only do we fail to see all of the consequences of technology, but we also fail to see all of the possibilities of its evolution and the benefits that can be derived.

When I worked at and with ARPA in the Defense Department in the late 1960s on what was to become the ARPAnet, the precursor to the Internet, and on the privacy and security issues surrounding new information technology, no one foresaw anything like where we are today. When I ran President Carter's Privacy Initiative and represented the U.S. at the OECD on international information, computer, and communications policy in the late 1970s, no one in our government or any of the other countries predicted what was to come. When I was President of Bell Atlantic Video Services in the early 1990s, where we created video-on-demand, a precursor to the Web, we only had the smallest inkling of what is now today's reality.

This plan embodies **very big ideas**, and it contemplates a **very large scale endeavor – the educational equivalent of our national commitment to put a man on the moon**. Simply stated, it proposes a **national commitment to give all teachers and students the basic online tools they need to teach and learn in the 21st Century**. It does not supplant teachers or the numerous existing endeavors in this area, but rather seeks to support, augment, aggregate, and enable them. It is not a response to the current economic crises, but it does propose ways for us all to contribute to the solution. It is not about any particular individuals or organizations. It is about ideas whose time has come. There are a few caveats:

- All of the ideas and technologies described herein are available or possible today. However, many of the explanations herein are simplified and many details are omitted. Also, in order to facilitate a national conversation, it is essential to have a common language for people with different backgrounds and interests.
- These ideas are not dependent upon each other. For example, deploying the technology infrastructure does not depend upon the funding mechanisms, and instead could be completely funded through traditional means.
- Unless otherwise noted, all of the companies and their related technologies mentioned in this plan are for illustrative purposes only. No commitments or endorsements of any kind are implied.
- No judgment has been made regarding any of the countless efforts and organizations that are already working in areas related to this plan. Future efforts would include a broad outreach to involve as many companies and organizations whose existing works can be supported by or utilized in this collaborative effort.

Over the past decade, I've had the privilege of talking to thousands of people and organizations about the ideas summarized in this plan. While everyone's crystal ball is a little cloudy, everyone agrees that we cannot drive toward the future by looking in the rearview mirror. The future is in front of us, not behind us. Tomorrow will be different from today, and it will look nothing like yesterday. To all who contributed so far to this effort, I express my appreciation and indebtedness. To our teachers, I convey the gratitude of your students. We wouldn't be who we are today without you.

Additional suggestions, alternatives, and better ideas are welcome. Feedback regarding existing activities that can be utilized in this endeavor is encouraged. Attainment of the goal is all that matters, for doing things the same old ways cannot continue. Paraphrasing the words of former President John F. Kennedy,

*Success in this endeavor will have a thousand parents.
Failure is not only an orphan; in this case, it is not an option.*

Arthur Bushkin
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Executive Summary

President Obama has asked for more support for education and for ideas on advancing the long-term human capital strategy for our country. This plan outlines a way to address the immediate and critical need for improved public K-12 education¹ in the United States, and around the world. This plan harnesses the power of technology, capitalism, and innovation to develop a new platform for learning – a platform that utilizes existing infrastructure (technology, people, and organizations) to provide meaningful and equitable education to all teachers and learners. Effective public-private partnerships will accommodate the scale of the effort and a collaborative implementation strategy will ensure its sustainability. This plan does not address what to teach; rather, it is a plan to make teachers more effective and learners more productive. This is a plan to provide **Free Universal Online Educational Services** (called **Open Educational Services**).

This plan offers a unique approach that is informed by common priorities, fueled by imagination, and builds upon technology and services that are already available. The focused collaboration between leaders from all segments of our modern world will result in increased benefits for individual students and will energize our teaching professionals by enabling new possibilities. This is a viable solution that will engage students and teachers alike, providing immediate benefits and driving future innovations.

This plan embodies **very big ideas**, and it contemplates a **very large scale endeavor – the educational equivalent of our national commitment to put a man on the moon**. Simply stated, it proposes a **national commitment to give all teachers and students the basic online tools they need to teach and learn in the 21st Century**. It does not supplant teachers or the numerous existing endeavors in this area, but rather seeks to support, augment, aggregate, and enable them. It is not a response to the current economic crises, but it does propose ways for us all to contribute to the solution. It is not about any particular individuals or organizations. It is about ideas whose time has come.

Advances in technology have made it possible to provide online services to an ever-expanding range of people through an increasingly broad array of technical means. Young and old, rich and poor, highly or minimally educated, can now all have access to the world's knowledge and experience, information and learning, on the most egalitarian basis in human history. This trend is only going to get better.

Information and services can be delivered to a growing range of devices, from computers and cell phones to mobile and other devices that seem to have leapt from science fiction movies into our everyday lives. We've gone from the time when our voice communications (telephone) was delivered over a wire and our entertainment and news (radio and television) came over the air to such an assortment of wired and wireless delivery methods that now everything seems to be available anywhere and anytime.

The systems and services that enable this capability range from a small Web site for a preschool or a neighborhood community to global online services like Google, Yahoo, Facebook, and AOL. This is a plan to combine the technology of services like these and the market mechanisms of the private sector with public purpose and shared responsibility. This is a plan to create the nonprofit, egalitarian equivalent of the large-scale commercial online services for education and learning.

This is a plan to provide the basic information and services over this educational online service in ways that make them effectively free of charge. To be sure, there are still costs associated with purchasing a computer or a mobile device, acquiring Internet or telephone access, and developing the content to be delivered and the systems to deliver it. Yet, the **incremental costs** of delivering these benefits on a very large scale can be negligible.

¹ This plan focuses on public K-12 education, but there is nothing in this plan that inherently limits it to public or K-12 education. Some of the ideas can also be applied to areas other than education.

We have proof of this possibility today, because virtually all of the ideas, approaches, technologies, etc., discussed in this plan **already exist today**. All we have to do is to align, aggregate, combine, and/or support these activities and endeavors **at a very large scale and in new and different ways**. This is a plan to:

- Provide a **shared technological infrastructure**, benefiting millions of people, with **shared tools for teachers and teaching**, and for **learners and learning**. It is **NOT** a plan for **what** to teach or **how** it should be taught, **who** should teach, or **where** teaching should occur.
- Create an ultimately **self-sustaining endeavor**, technologically, academically, and financially, by relying upon growth in the capital markets and the **VOLUNTARY** participation and contribution of individuals and organizations.
- Create the **education and learning equivalent of the space program** by uniting and utilizing the ingenuity, creativity, and financial growth capabilities of the **private sector**, and the capacity, talent, and dedication of the **educational sector**, combined with new forms of **public/private partnerships**.

No commercial company or government agency can undertake an endeavor of this scale itself. This plan envisions an appropriately constituted nonprofit public charity as the parent entity of a large web of commercial and nonprofit entities, working together collaboratively in formal and informal ways. It envisions colleges and universities, and teachers and teaching organizations, working together to identify, organize, and aggregate already existing Web-based content into easily accessible tools and services for teachers and students. It envisions teams of people teaching the teachers on the use of this rapidly growing 21st Century resource.

This plan uses a simple, common language for two important, interrelated concepts.

- A **Technology Platform** facilitates **delivering** or **providing** information and services to users, be they consumers, students, teachers, or whomever. (Visualize the building and the shelves in a library or Amazon's computers and the system software that runs them.)
- A **Technology Portal** enables these users to **access** or **find** the information and services available on the platform. (Visualize the card catalog in the library or the search directory on Amazon's home page.)
(and)
- **Open Source** refers to making freely available, at no charge, the original programming code (called the Source code) for any software. Technically sophisticated people are the first direct beneficiaries of the Open Source code, although everyone subsequently benefits. (Visualize the Linux operating system, the Java programming language, or the Mozilla Firefox browser.)
- **Open Services** refers to making freely available, at no charge, the **results** or the **usage** of any information, software, or services, regardless of whether or not the source code for underlying software is Open Source. Users are the first direct beneficiaries of Open Services, although technically sophisticated people may have played a role in some cases. (Visualize the Wikipedia, MIT's Open Courseware, or the countless examples of freely available educational content and services already on the Web.)

There is no simple, clear boundary between **platforms** and **portals**, or between **Open Source** and **Open Services**. In each pair, the terms are often used interchangeably. Just think of the first category in each pair as being of greater interest to the technically sophisticated developers or producers, and the second category as being of greater interest to the people who use or benefit from the technology. For the purposes of this discussion, everything else is detail.

This plan has several basic components.

- The creation of a **Technology Platform** (or Platforms) to enable the delivery and utilization of **Open Educational Services**.
- The aggregation of appropriate and beneficial educational content, as decided by educators and providers, to be made available through a **Technology Portal** (or Portals) on this platform.
- The establishment of new kinds of **cost-sharing** and **cost-shifting** to cover the costs of providing these **Open Services**, and new kinds of **public/private partnerships** to make this effort sustainable.

This plan assumes that we cannot continue to rely solely upon governments, charitable donations, fees for services, or third-party payers, such as advertisers, to fund this effort. Rather, it proposes a broad and new reliance upon the commercial marketplace, the stock market, and consumers themselves to create a new, sustainable source of funding for social good.

The technology and educational elements of this plan are **VOLUNTARY** and are separate and independent from the funding mechanisms. The government, a grant-making foundation, or a philanthropist could fund this whole plan. However, this plan also presents methods for its own sustainable funding based upon new ideas of **Capitalism for Social Good**. It outlines, for example, a plan for **Warrants in the Public Interest** (visualize stock options benefiting the rest of us) that will produce billions of dollars for socially beneficial causes, **at no cost to the contributing companies, no cost to the recipient nonprofits, and with negligible impact on the companies' existing shareholders.**

This plan enunciates expanded **Principles of Social Responsibility**:

- **Sharing the Benefits – Compassionate Capitalism**
- **Sharing the Costs – Compassionate Citizenship**

This is a plan to create new kinds of public/private partnerships to:

- Aggregate, integrate and leverage technology
- Consolidate funding and spend efficiently for the benefit of many
- Meet societal needs through non-traditional processes
- Use a “campaign” approach to spread the benefits of technology for social good



Working together, we can all share the costs and the benefits of a more effective and a more equitable educational system. While the pieces are available today, there is no way to bring them together without a national public effort. Educational excellence and technological capacity are unevenly distributed today – and that must be changed.

We must answer President Obama’s call. YES, WE CAN – AND WE WILL.

What's the Problem?

Our national educational system is broken. Many of our students don't have the skills to handle 21st Century jobs, and we're not creating enough of these jobs. Many of our teachers are not trained adequately to teach the math, science, and technology skills that are needed for 21st Century citizenship. And, we're not using technology (for all manner of teaching) as much as we could and should in our educational system. Our nation is in danger of falling behind competitively and losing our edge in innovation as the world becomes flatter and more interconnected.

We are not living up to our promise of equal opportunity for all. We're dividing further into the lucky, the wealthy, and the well educated versus the rest of us. When huge percentages of our children cannot read or handle basic everyday math, let alone be ready for college if they're fortunate enough to graduate high school, we have a big problem.

This is not just a moral issue of fulfilling the American promise and the desire of every parent to give their child the best education possible. It is also a deterioration of our core human capital, not unlike the deterioration of our physical infrastructure and the crisis in our financial capital markets. We must rebuild our educational system and make the benefits available to everyone, or we won't have the capacity to rebuild our bridges and our economy, let alone retain our leadership in the world. The impact of our human capital crisis is a major national issue affecting us all.

YES, some of our kids are fluent in the new technologies. But, do they know what they will need to know in math and science? Will text messaging, social networking, and playing video or online games be adequate preparation for the future? We must make technology-based learning, guided by trained teachers in our schools and available online 24/7, as ubiquitous as technology-based entertainment.

YES, the tools, technology, teaching techniques, and funding capacity for everything in this plan already exist today. No, they're not universally available, accessible, or being used adequately. YES, WE CAN quickly and easily change that.

YES, we have the national wealth to fund this. But, the same old strategy of getting someone else to pay the costs is unsustainable and will not work. Whether the costs are paid by government, corporations, charitable donations, or advertisers, we all pay the costs sooner or later, anyway. So let's pay the costs directly in ways that are more equitable and that will actually end up costing less overall. And, let's all do this **VOLUNTARILY**. YES, WE CAN.

YES, WE CAN rely upon the private sector, the capital markets, and the entrepreneurial spirit of our people to continue to be engines of economic growth and to produce educational tools and technology. YES, WE CAN develop, distribute, and deploy the online tools and technology differently, thereby achieving economies of scale to make the overall costs lower.

YES, WE CAN harness the talent of our teachers and our educators to guide the development, deployment, and availability of the educational content. YES, WE CAN make the best content available to everyone. YES, WE CAN be driven by more than what sells and entertains, or by what benefits a particular company, with educators and teachers, and positive, measurable results, guiding these choices.

YES, WE CAN harness the talent of our people to develop content and to train our teachers. Yes, our teachers are overworked, underpaid, and underappreciated, so it's no wonder that they have little time to keep abreast of the new technologies, and the information and services already available online. YES, WE ALL CAN help them, in many ways.

YES, WE CAN have better educated kids, a more just society, and greater economic vitality. Even if there were no economic crisis, we would have to face this challenge sooner or later. The longer we wait, the more we harm ourselves and our children. YES, WE CAN all be part of the solution.

YES, WE CAN embark on the educational equivalent of the space program that sent a man to the moon – an educational program to launch our children into the 21st Century with the preparation they need and deserve.

A Call to Action

Rudy Crew,² has written that, in 2007, six years after the passage of the No Child Left Behind Act:

- One-third of American eighth graders cannot perform basic math. That means more than a million thirteen-year-olds can't do the simplest calculations needed to buy a candy bar or ride a bus.
- One-third of all teachers leave the profession in their first three years; by five years, half of them have left.
- A black child in Washington, DC, has less than a 30 percent chance of learning how to read before he turns ten.
- The odds that *any* given ten-year-old in a large American city can read are about fifty-fifty, and six in ten for the nation as a whole.
- Only one in five students entering college is prepared for college-level work in math, reading, writing, and biology.³

Bill Gates⁴ has written:

How many kids don't get the same chance to achieve their full potential [as I did]? The number is very large. Every year, one million kids drop out of high school. Only 71 percent of kids graduate from high school within four years, and for minorities the numbers are even worse – 58 percent for Hispanics and 55 percent for African Americans. ... The Federal No Child Left Behind Act isn't perfect, but it has forced us to look at each school's results and realize how poorly we are doing overall. It surprises me that more parents are not upset about the education their own kids are receiving.⁵

Educating our children is an enormous task at any time, but it is becoming a greater and greater challenge every day. The world is moving to a future based upon math and science; competitive domestically and internationally; and dependent upon our personal and collective commitment to knowledge, innovation, and creativity. We are wasting our most precious resource, our children, and we are risking their future and ours.

But, we cannot simply **admire** the enormity, or **lament** the tragedy, of the problem. Instead, the time has come to:

- **Embrace** as a **Noble Cause in its Own Right** the **Harnessing the Power of the Technology for Social Good**, not just social networking, access to information, entertainment, or commercial activity.
- **Commit** ourselves to the specific goal of providing **Open Services** to distribute **Free Basic Educational Services**.
- **Recognize** that all of the basic elements to achieve this objective exist now, and that the major challenge will be to align and aggregate them through new kinds of public/private partnerships.
- **Exploit** the innovation, entrepreneurship, technological development, and financial growth of the private sector to power this endeavor.
- **Augment** the more traditional means, methods, and institutions of education with tools and capabilities heretofore only available to a fortunate few.
- **Acknowledge** that now, more than ever, change in the way we educate our children is needed, for without better education we cannot have jobs, competitiveness, and innovation.
- **Accept** that a new way is available, a way that only succeeds if we all work together.

² Rudy Crew is Professor of Education Leadership at the University of Southern California (USC). Previously, he has been Superintendent of Schools for Miami-Dade County Public Schools (the fourth largest school system in the U.S.), Chancellor of the New York City public school system (the nation's largest), as well as Superintendent or Deputy Superintendent of Schools in Tacoma, Sacramento, and Boston.

³ "Only Connect: The Way to Save Our Schools," Rudy Crew, 2007.

⁴ Bill Gates is, Co-Chair, Bill & Melinda Gates Foundation, and former Chairman, Microsoft.

⁵ "2009 Annual Letter," Bill Gates, Co-Chair, Bill & Melinda Gates Foundation.

It is time to make educational services available to all. Learning and teaching services can be provided easily, inexpensively, and broadly in ways never before possible. All of the necessary elements already exist. All that is required is to create new kinds of partnerships to align the interests and deliver these services.

The time has come for each of us, individuals and organizations, to **contribute** to the solution. This is not merely a challenge for governments, or schools, or teachers, or someone else. This is a challenge for **all** of us.

We are familiar with ancient parable that teaches us the importance of teaching others and of providing them with tools. This plan is a modern-day equivalent of this time-honored wisdom.

Harnessing The Power of Technology



We all pay for education now, and we all pay for the consequences of the inequalities in and the failures of our educational system now. If we don't better educate our children and our teachers, we won't have an adequate supply of consumers, jobs, markets, or products and services in the future. This is more than an issue of competitiveness. This is an issue of what kind of society and life we all will have in the years ahead.

All of the tools, technologies, and talents exist today. Unfortunately, they are often not universally accessible, but instead all too often available only to a fortunate few. This is more than universal broadband access or having a computer or a mobile device. This is also more than a moral issue of equal educational opportunity for everyone, although many would argue that morality alone is sufficient justification. This is an issue of who we are as a people, and it is an issue of individual survival in the 21st Century. It affects our community, our country, and our world.

While all areas of education are important, greater skills in math and science are increasingly essential for both students and teachers, and for our society as a whole. Having employees with an understanding of math and science is important to companies as they create the products and services of tomorrow. Since the educational background of most teachers is not in math and science, providing teachers with these tools becomes critical to long-term job creation.

We must equip our teachers with the tools necessary to build a pipeline of human capital with the proper skills for 21st Century. We must improve teacher productivity year after year, and we must give teachers the ability to assess, engage, and manage student achievement issues much more effectively. We must do this for ourselves and our children, and we must share the benefits with the rest of the world.

This is an idea whose time has come. We have the means to make it so, and now we must summon the will. We can all contribute to a better educational system. As President Obama said:

For everywhere we look, there is work to be done. The state of the economy calls for action, bold and swift, and we will act – not only to create new jobs, but to lay a new foundation for growth. We will build the roads and bridges, the electric grids and digital lines that feed our commerce and bind us together. We will restore science to its rightful place, and wield technology's wonders to raise health care's quality and lower its cost. We will harness the sun and the winds and the soil to fuel our cars and run our factories. And we will transform our schools and colleges and universities to meet the demands of a new age. All this we can do. And all this we will do.⁶

YES, MR. PRESIDENT, WE CAN – AND WE WILL. WE HEAR YOUR CALL – AND WE WILL ANSWER IT.

⁶ *"Inaugural Address,"* President Barack Obama, January 20, 2009.

Technology

Advances in information and communications technology now make achieving the goal of **Free Universal Online Educational Services**, called **Open Educational Services**,⁷ possible. Countless Web sites and online services already provide resources critical to achieving this vision. What remains to be done is to bring many of these existing Web sites, online services, and other capabilities together in a new and collaborative environment for effective and egalitarian education.

Visualize an online environment that is devoted entirely to education and learning. In other words, the equivalent of a Google, or an Amazon, or an AOL, or a Yahoo, or an MSN, a Facebook, etc. (although not necessarily how they are implemented today) that provided access to knowledge and information, courseware and other services, collaboration with teachers and experts, etc., without advertising and at no charge (at least for the basic levels). “What if” there were an online service driven by public goals rather than financial objectives, not because there is anything wrong with financial objectives, but simply because financial objectives do not necessarily address all of society’s needs, let alone in a universal and egalitarian way.

Major elements of this already exist and the technical challenges arise from the large scale of the effort. Getting people and organizations to cooperate and collaborate, developing a sustainable effort to pursue and promote the effort, and other related tasks, will likely be harder and take longer than building the technical infrastructure, which consists of two interrelated technical challenges:

- Assembling a technology **Platform** to **deliver** and **provide** these services
- Creating a **Portal** so that people can **find** and **access** these services

The underlying technology is available on a very large scale with substantial economies of scale. Not only is the vision and its benefits attainable, but the net cost of doing so will be less than the cost of doing similar things over and over again, each on a smaller scale. Once a scalable platform is available, unlike hardware or communications access, software services can be replicated at essentially no incremental cost.

5.1 Background

The provision of universal infrastructures is not new. Long before the digital age, the infrastructure for the provision of power, water, and highways was deemed in the public interest. Communications infrastructures have evolved from basic telephone services to a broad range of services, including radio, television, cable, cellular, and digital broadband.

While governments do not necessarily provide these communications services, government policy is a major factor in ensuring that these infrastructure technologies are provided in the public interest. One of President Obama’s stated objectives is to ensure that digital broadband,⁸ the technical name for high-speed Internet access, is universally available, even in rural areas.

This plan, however, is concerned with the information services that travel over the communications infrastructure, not the infrastructure itself. The application of the World Wide Web expands constantly in areas of collaboration and social networking, commerce and shopping, entertainment and games, and education and learning. This plan addresses the issue of how the communications infrastructure is used for the socially beneficial goals of training all of our teachers and educating all of children.

⁷ Open Services are not limited to education.

⁸ Visualize a fixed amount of water flowing through a pipe. The wider the pipe, the faster the water can flow. The term “broadband” draws its name from this analogy and is used as a generalization for faster communications speeds, regardless of the actual transmission medium (e.g., copper wire, coaxial cable, cellular wireless, Wi-Fi, etc.)

To benefit from the Web typically requires a desktop computer, a laptop, or a mobile device (sometimes called a Smartphone⁹) and the ability to access an appropriate communications network (sometimes called, connectivity). To obtain these devices and the appropriate connectivity, costs are incurred each time.¹⁰ However, once the basic information or other service is provided in the new digital era, the cost of providing the same information or service to someone else is negligible.

As a general statement, just like it does not matter how many people are listening to a radio station or watching a television program, it does not matter how many people are accessing a Web site, **as long as the original design of the Web site, and the access paths to that Web site, can accommodate the larger usage.** Preparing for this scalability can be complex and costly, and is a limitation of many existing Web sites. This plan contemplates a very large, scalable Web site, which is more appropriately called an **online service**, with two fundamental components, a **platform** and a **portal**.

5.2 A Platform

The technical heart of this plan is the creation of a **Technology Platform for Open Services**. A **Technology Platform** is a **place or environment** in which or on which information or services can reside, operate, or simply happen. **A Technology Platform enables the delivery of information or services.**

Microsoft Windows and the Apple MAC Operating System are technology platforms. Google, Yahoo, Facebook, and Amazon are technology platforms, because they not only perform specific functions (such as search and book sales, respectively), but because they also host services provided by others. The Apple iPhone and the Research in Motion (RIM) Blackberry Storm are technology platforms, because others can write software programs that run in or on those environments. The World Wide Web itself is a platform.¹¹

Most of us actually use one or more technology platforms every day without even thinking about it. And, as the technology evolves, we're becoming increasingly oblivious to the actual location of the platform and the information or services that operate or reside on it.

In the recent past, information and services resided primarily on our own personal computers or on our corporate or organizational computers. Then, with the proliferation of the Web, information and services moved to corporate or organizational Web sites. As **Search Engines, Portals** (see below), and **Online Services** grew in popularity, the actual location of information became even less important.¹² Nowadays, the term **Cloud Computing** is used to describe the idea that information and services are either on our computers or otherwise just out there (in the "**Cloud**," so to speak), and that ordinary users needn't really be concerned with their actual location.

The critical component that makes this plan possible is that the cost of creating a large, scalable platform is dropping dramatically, while at the same time the capabilities that can be delivered on a platform are growing rapidly. While there are many companies that can provide the physical servers and/or the system software to create a virtual (online) experience (i.e., a Web site or an online service) achieving the reliable scalability necessary to implement this plan is the tipping point.

⁹ While there is a natural tendency to call all mobile devices, "cell phones," more and more mobile devices may or may not have voice telephone capability, and they increasingly use other forms of connectivity besides the cellular telephone network. This is just one of many examples of how our habit of naming services according to their underlying technology (e.g., telephone, television, cable, cellular) is becoming increasingly obsolete. Each service can be delivered in many ways.

¹⁰ There are certain services, such as public Wi-Fi (e.g., in a restaurant or airport), for which this is not necessarily true, since many people can use the same service for no additional cost.

¹¹ Strictly speaking, the Internet is the communications platform upon which the World Wide Web operates or resides. Increasingly, this distinction is ignored, and the terms "Internet" and "World Wide Web" are typically used interchangeably.

¹² Many other relevant issues, such as privacy and security, or licensing and intellectual property, are beyond the scope of this document, although all of these issues can certainly be addressed.

Potential providers of a scalable platform infrastructure include the more traditional technology companies (e.g., IBM, Microsoft, HP), as well as newer online companies (e.g., Google, Yahoo, Facebook, Amazon). Increasingly, these companies promote aspects of Cloud Computing in their service offerings. Implementation of this plan would involve acquiring this capability from one or more existing companies capable of providing scalable national and global services.

The evolving nature of computers and mobile devices is also accelerating the advance of Cloud Computing and making the location of information or services less relevant. This is no longer an issue of computers in the classroom, or wiring schools, although both are still important. This is now an issue of Harnessing the Power of Technology for Social Good, anywhere, anytime, because the technology and connectivity are becoming ubiquitous.

Newer mobile devices, like the Apple iPhone and the Blackberry Storm, can **both** access the Web **and** store information and programs (called **applications** or **apps**). The mobile device user may not even know or care if the app being used actually resides on the Web and is being accessed via the mobile device **or** if it resides on the mobile device itself. If the app is an arithmetic quiz and the user is a young student, for example, the effect can be the same, regardless of whether the service is stored or delivered.

While many people are still adjusting to using computers to access online information, services, and portals, the implications of the newer mobile devices are most certainly going to be even more profound. In the last six months of 2008, for example, when Apple first allowed others to provide software for the iPhone, more than 10,000 apps have been created, the bulk of which are free or cost just 99 cents. In these six months, iPhone users downloaded 500 million apps in total, and the average iPhone user downloaded at least 15 apps.

Said another way, 500 million copies of the same thing were downloaded. Beyond the initial costs associated with purchasing the iPhone and accessing the communications network (paid by the user), developing the software apps (paid by the software developer), and hosting the apps on Apple's Web site (paid by Apple), it cost essentially nothing to replicate and deliver 500 million apps.

Imagine if one of these apps were a quiz, or a physics lesson disguised as a game (a real example). Of course, the growth in laptop computers can yield the same effect, and the new, small "netbook" computers that are "in between" laptops and handheld mobile devices will only accelerate this trend. Entertainment, communications, and education will be available 24/7, and will not be limited to any fixed location, be it home, office, or classroom. The issue of computers in the classroom is being eclipsed by mobile technology throughout the world. Consider the following:

Mobile has long since surpassed the Internet in terms of numbers of users. And unlike the Internet, subject of fierce Digital Divide debates among enthusiasts and skeptics for a decade, it has been spontaneously adopted by billions of people and embedded deep in social consciousness. African peasants paint their mobile phone number over their front doors. Indian slum dwellers buy SIM cards to use on friends' handsets. Chinese students spend three months allowance to buy a handset they can surf the web with. ...

The three quarters of the world who have yet to access the Internet or experience digital multimedia will mostly do both through mobiles. In terms of ubiquity, it is no longer a case of if, but when. A world in which nearly everyone owns a mobile linked into networks advanced enough to offer video and location-based services is years, not decades, away.¹³

Consider how American teens are using the technology in this evolving online world.

More teens play online games than visit social networking sites. Also, the number of teens using email has dropped significantly over the past four years. ...

Despite the commonly held perception that teens live on sites like MySpace and Facebook, 78 percent of

¹³ "The Promise of Ubiquity, Mobile Media in the Global South", Internews Europe, 2009.

teens 12-17 play online games, while just 65 percent use social networking sites. Those numbers diverge for the Generation Y ... as just half of adults 18-32 play online games while 67 percent of them are on social networking sites.

Despite the fact that nearly a third of teens are not social networkers, these sites, along with text messaging and instant messaging, are quickly shoving aside email as a preferred form of Web communication for this group. 73 percent of teens 12-17 use email – still a sizable number – but down considerably from the 89 percent figure recorded in 2005. ...

In general, teens and Generation Y are more inclined to use the Internet for fun than for utility – which perhaps also explains their diminishing interest in email.¹⁴

The potential to provide educationally valuable information and services anywhere and anytime is staggering. Mobile devices that deliver music are now ubiquitous among young people, and versions of these devices that can also be mobile platforms, Internet access tools, and reference libraries are now proliferating rapidly as the manufacturers add enhanced capabilities.

One of the most purchased books for Apple's iPhone and iPods is a \$0.99 collection of 14 children's books. Random House has started making some of its books available for mobile devices.¹⁵ Google is making 1.5 million books available for free on computers and now also mobile devices. Amazon is making the books for its e-book reader, the Kindle, also available on mobile phones.¹⁶

In the near future, more and more people of all ages will be carrying educational tools and reference libraries in their pockets. We all have a responsibility to ensure that they have an equal opportunity to use them for educationally valuable purposes – and that, in fact, they know how to do so.

5.3 A Portal

While a Platform enables delivery, **a Portal enables the user to *find* or *access* the information or services being delivered.** A Portal is a place to go to start, a directory where one can find information or services, a home page.

We all use Portals on the Web every day. Portals are places to go to, or doorways to go through, where services can be found. Implementing an easy-to-use Portal is more than an issue of the technical user interface. It also involves cataloging the information and the services in many different ways. It involves anticipating the user's thought process, presenting it in ways that users will understand, and making the whole experience pleasant.

If the Platform is a commercial mall, then the Portal is the directory listing the stores in the mall, where to find specific categories, like menswear, shoes, food, and so on. Of course, each store in the mall may also have its own directory capabilities, like a restaurant's menu, a salesperson to ask, a display table, and so on. All of these help you find what you are looking for; they help you narrow your search.

Assembling a list of what's available from an online query (like Google) is different from pre-creating searchable categories (like most Web sites). Some examples of category listings might be: arithmetic (by subject), third-grade material (by level), the curriculum for second grade in XYZ County (by geography), Instructor ABC's lectures (by author), the JKL Company's Africa series (by source), an instructional video on tying shoes (by type of delivery), and so on. In fact, it's highly likely that there will need to be many different kinds of Portals to assist people in finding the particular educational materials they seek.

¹⁴ "Generations Online in 2009," The Pew Internet & American Life Project, 2009. Summary by Mike Shields.

¹⁵ *BusinessWeek*, Olga Kharif, January 19, 2009.

¹⁶ *New York Times*, Miguel Helft, February 6, 2009.

In many cases, the information being accessed via a Portal actually resides on the original provider's Web site. Google does not "store" or "host" the information that "indexes" on its computers, only the "indices" or "links." YouTube, on the other hand, does store the videos that its users "upload," and it also provides a Portal so that the videos can be searched or found.

There are several conclusions from the technical part of this discussion.

- The scalability mentioned throughout this plan can refer to the Platform or the Portal functions, or both.
- The technological infrastructure must have the potential and the capacity to become very large.
- The Platform must be available on, or accessible by, multiple devices (e.g., computers, mobile, etc.) and via multiple means (e.g., wired, wireless, etc.).
- The information and services must be accessible through one or more Portals that emphasize ease of use and educational values and utility, and not commercial values and popularity.

All of this is possible today. But, unless we take steps like those outlined in this plan, the playing field will increasingly be dominated by large commercial enterprises that must, by definition, be ultimately driven by financial considerations. Smaller commercial companies will focus their attention on market segments with the capacity to pay in order to maintain their profitability, and will not be able to provide their products and services to those that might need it the most.

Commercial companies are not doing anything wrong here; they are just not meeting all of society's needs, even though they might truly want to do so.

We can change this in ways that will benefit everyone.

Open Services

6.1 Background

A popular and growing movement in the area of software creation and modification is the **Open Source** movement. The basic idea behind this movement is simply that the original code in which a software program is written, called the Source Code, should be free of charge and publically available. Linux, a widely used operating system, is Open Source. The Firefox browser is Open Source. Companies, like Sun Microsystems and Red Hat, provide Open Source software. Half of Google's 20,000 employees use a version of the Linux Open Source operating system.

Some people express philosophical justifications for Open Source software, saying that software, like other forms of knowledge, should be freely available. Others express a counter argument that developers, writers, or owners deserve compensation for the work. But, there is also a practical view, expressed by the nonprofit Open Source Initiative.

Open Source is a development method for software that harnesses the power of distributed peer review and transparency of process. The promise of Open Source is better quality, higher reliability, more flexibility, lower cost, and an end to predatory vendor lock-in.¹⁷

This plan moves beyond the issue of making the Source Code of software publicly available at no cost. Instead, this plan focuses on Open Services, a growing movement to make the **use** and the **benefits** of software and applications publicly available at no cost, whether or not the Source Code itself is publicly available.

Open Services are not new; they are just not as widely recognized as a classification as Open Source. Many of the applications for the iPhone are free. Many of Google's services are free. Broadcast television is free, as are portions of cable television. Facebook is free. CNN is free. The Wikipedia is free. Much of the information and the services available on the Web are free.

Frequently, these services are called Open Source, when under the terminology used here, they would be called Open Services. This is not an academic discussion about names. In addition to demonstrating that the idea of Open Services is not new, the different name will focus the conversation on the expanded possibilities.

Technically sophisticated people benefit from the ability to access the source code of software, and we all benefit from their efforts to improve that code. A much broader community of the world benefits directly from the open access to the knowledge and information in the Wikipedia, the Public Library of Science, the Internet Public Library, and Librarians' Internet Index, and the many other information sources on the Web. Similarly, the world benefits from the educational services on the Discovery Channel and PBS, the educational videos on National Geographic and YouTube, the curricula on OpenCourseWare, and others like them. Open Services are everywhere already.

Of course, there are costs associated with the development and operation of these services. The consumer, user, or student simply does not pay those costs directly, if at all. Sometimes, the provider itself is paying the costs, sometimes an advertiser, sometimes a donor, sometimes a government, and so on. While this approach of a third-party paying, instead of the beneficiary paying, certainly works in many cases, it is an unsustainable trend in the long run. Sooner or later, we all pay somehow, and a subsequent section will explore alternatives for financial sustainability.

¹⁷ The Open Source Initiative, a nonprofit foundation formed to educate about and advocate for the benefits of Open Source and to build bridges among different constituencies in the Open-Source community.

6.2 Open Educational Services

Educational information and services (called “Educational Content”) are everywhere on the Web. Some is available at no cost, and some is available for some form of fee. Some of the free content is supported by advertising, and some is supported by the producers, providers, or developers who see it in their interest to make it freely available.

In the educational world itself, Open Educational Services are proliferating, particularly in higher education. The following descriptions are taken directly or paraphrased from the Open Services Wikipedia and from the organizations’ Web sites, and are thus themselves examples of Open Educational Services.

The term “open educational resources” was first adopted at UNESCO’s 2002 Forum on the Impact of Open Courseware for Higher Education in Developing Countries. Open educational resources are educational materials and resources offered freely and openly for anyone to use and under some licenses to re-mix, improve and redistribute. Open educational resources can cover a broad range, including, but not limited to:

- **Learning Content:** Full courses, course materials, content modules, learning objects, collections, and journals.
- **Learning Tools:** Software to support the creation, delivery, use and improvement of open learning content, including searching and organization of content, content and learning management systems, content development tools, and on-line learning communities.
- **Assessment Tools:** Software that can be utilized early in the process to increase productivity throughout the learning process – for example, by ensuring that content is not boring or repetitive, because it has already been learned or is beyond a learner’s capacity because the prerequisite foundational content has not been mastered.
- **Implementation Resources:** Intellectual property licenses to promote open publishing of materials, design-principles, and localization of content.

MIT OpenCourseWare (MIT OCW) is an initiative of the Massachusetts Institute of Technology (MIT) to put all of the educational materials from its undergraduate- and graduate-level courses online, free and openly available to anyone, anywhere. MIT OpenCourseWare can be considered as a large-scale, Web-based publication of MIT course materials.

The OpenCourseWare Consortium is a collaboration of more than 200 higher education institutions and associated organizations from around the world creating a broad and deep body of open educational content using a shared model. The mission of the OpenCourseWare Consortium is to advance education and empower people worldwide through OpenCourseWare, the free and open digital publication of high quality educational materials, organized as courses.

Apple’s iTunes U manages, distributes, and controls access to educational audio and video content for students within a college or university as well as the broader Internet. The member institutions are given their own iTunes U site that makes use of Apple’s iTunes Store infrastructure. The online service is available without cost to those uploading or downloading material, and there are currently over 75,000 files available to download.

Curriki.org is a community of educators, learners, and education experts who are working together to create quality materials that will benefit teachers and students around the world. Curriki is an online environment created to support the development and free distribution of world-class educational materials to anyone who needs them.

Many groups, organizations, schools and school districts, and even states are already pursuing endeavors in this direction.

- Thinkport.org is a resource for Maryland educators, families, and communities from Maryland Public Television and Johns Hopkins University Center for Technology in Education.
- KnowItAll.org is an educational Web portal established in partnership between various state agencies in South Carolina and Bell South and the independent telephone companies.

Visualize combining these state efforts, for example, so that they shared a common platform and whatever common educational content that each state chooses. Then, the states could easily have separate portals that would provide access to their “virtual” areas containing their common content, whatever separate content they chose, and so on.

This will not happen overnight, but aggregating the available free content and developing a portal to access it under this plan is the first step. As the content base grew, and as the value of different means of access increased, the effect would be the creation of an ever-expanding composite of knowledge. It would be like the Web itself, only the next layer above.

The ideas in this plan are not new; the proposed scope is new. The ideas are already being put into practice in a piecemeal fashion, with uneven results and coverage. This is a plan to make them more effective, to reduce the overall costs, and to spread the benefits more broadly and more equitably. Collectively, we already know what to do. We just need to harness that power of that knowledge to make it so.

6.3 Content vs. Teaching

Any discussion of education, technology, teachers, and students, especially teenagers, generates strong opinions. No one thinks the status quo is working, although many profess to be involved in endeavors that will improve the situation. Some people believe that everything that could possibly be needed is already available on the Web somewhere, although most would agree that access to what is already on the Web is uneven at best. Ultimately, though, the main questions and concerns always revolve around “who decides.”

There is a broad consensus that, whether or not “it’s all there,” there is already enough on the Web already to change the way students learn. But, there also seems to be a consensus that it’s not adequately integrated into the traditional teaching and learning processes, which is a different issue. Who decides?

This plan divides this issue into two separate, interrelated pieces: the tools and infrastructure for teaching and learning, and the teaching and learning itself. This is a plan that the former by creating an Online Service for Social Good focused on Education. It contemplates Open Educational Services. The obvious next questions are:

- Who decides what content should be made available?
- Who decides what is to be taught?
- Who decides how it is to be taught?
- Who decides where it is to be taught?

The people best equipped to answer such questions are those with the requisite skills, knowledge, experience, responsibility, and authority. This plan does not address the “who decides” issue, but instead creates a more effective and egalitarian infrastructure within which such questions can be addressed.

- Since a great deal of educationally valuable content is already available on the Web, which of that content will be made available through the portal? Assuming that the content is free of charge, there will need to be teams and councils of teachers, educators, and technologists to make those decisions. The good news is that these people will be freed of commercial and other pressures to make these decisions.
- Even when content is made available, rated, certified, or in some other way sanctioned or endorsed, teachers (used in the broadest sense to include formal teachers, parents, or even self-taught learners) must still be the ones who decide what, how, where, and when to teach.
- Technology is already changing the nature of teaching itself, and will only continue to do at a greater and greater pace. Using adaptive assessment technology, for example, teachers can quickly find out what learners know and don’t know about any curriculum. This allows just-in-time content to be customized for each learner at his or her individual pace. Teachers can be freed (in many cases, but certainly not all, cases) from delivering the step-by-step instruction (with that activity delegated to software) and empowered to focus more on managing issues, teaching concepts, and motivating students.

This plan facilitates and enables more effective teaching and learning in the 21st Century, but does not dictate it in any way. As we move into an increasing technology-enabled world, this is a plan to ensure that our teachers and students are also better enabled.

Making It So

7.1 The Campaign

This is a **Campaign for a Cause, not a Candidate**. This is a plan to **Harness the Power of:**

- **Technology for Social Good**
- **Capitalism for the Common Good**
- **Innovation for Education**
- **People for the Future**

This is a plan for the educational equivalent of the space program that sent a man to the moon – an educational program to launch our children into the 21st Century with the preparation they need and deserve. This is a plan to tap the spirit and talent of America.

All of the proposals in this plan are **VOLUNTARY**. All are likely to have proponents and opponents, and certainly produce debate. Some are in use today; others are new. But, regardless of the details, there is no alternative to collaboration in the 21st Century.

To a large extent, the funding and sustainability aspects of these proposals are independent of the educational aspects of the proposals. That is, companies can provide portions of their educational content for free, or developers can produce Open Services applications, and we still can continue to rely upon the traditional funding models for education. The only problem is that the traditional funding methods haven't worked in the past (in terms of producing the results we all want), and the outlook for the future is even grimmer.

Government funding is less and less of an option. More or less taxes, stimulus versus bailout, no one has any good answers, and consensus is hard to find as our financial crises deepen. Yet, everyone agrees that not funding education, and not providing a quality education to all of our children, only worsens our collective future. Therefore, we have no alternative but to find new funding mechanisms.

This plan will succeed if YOU help spread the word. YOU know people and organizations with a role to play and with something to contribute. YOU must identify supporters and promoters, influencers and contributors. YOU must contact them and solicit them. YOU must help foster a national conversation about these issues. YOU must help identify and implement the best ideas, whether from this plan or from any other source. All that matters is that we live up to our national commitment to provide a quality and equal educational opportunity for all of our children.

If YOU don't play a role, then this plan will have difficulty succeeding, for without shared responsibility, there can be no shared success. YOU must take the initiative.

7.2 Organization

The parent, umbrella organization for this effort must be a U.S. 501(c)(3) tax-exempt, nonprofit public charity, which is a specific category of nonprofit organization.¹⁸ Without the proper legal and tax structure, this plan will not work. On the

¹⁸ As background, the terms "nonprofit" and "foundation" are typically used very loosely, and often interchangeably, to describe an organization that has a "social" mission and that (usually) does not try to "make money." Yet, strictly speaking, the term "nonprofit" is simply an overarching IRS tax status. There are many different kinds of organizations under the IRS umbrella designation of nonprofit, and they are subject to very different rules and requirements.

other hand, using this legal and tax structure provides significant advantages and forms the basis for an effective web of nonprofit and for-profit entities working together to achieve a common good.

There are also important marketing and policy reasons for making the parent entity of this endeavor a nonprofit. Private companies, large and small, will play significant roles and make important contributions to this endeavor; just not as the dominant entity. In addition to all else, the effort must be, and must be perceived to be, neutral. It cannot favor, or be seen to favor, one private company over another. **The parent entity must be viewed by all as being focused solely on achieving and maintaining a sustainable Open Educational Service.**

Visualize a parent, nonprofit public charity capping a virtual, distributed combination of other nonprofits, for-profits, financial entities (e.g., a new National Education Trust Fund), schools and universities, groups and associations, and volunteers and individual citizens, all working together toward the common goal. In addition to the oversight and coordinating role of the nonprofit central parent, there would also be a range of:

- Governing and advisory boards (**Boards**),
- Affiliated groups and bodies (**Councils**), such as an Educational Content Identification and Accreditation Council, a Teachers' Advisory Council, a Students' Advisory Council, and a Technology Advisory Council.
- Wholly or partially owned or managed nonprofit and for-profit entities (**Subsidiaries**), and
- Cooperating and collaborating nonprofit and for-profit groups and organizations (**Partners**¹⁹), such as teacher groups, parent groups, math and science groups, school districts, content providers, and technology providers.

The Boards and Councils will be closely identified with the parent. The Partners will remain separate entities, maintaining their own tax status, brand identity, management and organizational structure, and so on. The Subsidiaries will likely be somewhere in the middle, depending upon each situation. All of these entities combined must function as one virtual organization sharing a common goal that is consistent with their individual goals and priorities.

The legal and tax structure to support this endeavor is not new or novel, only the scale of the effort is larger than normal. Just like the underlying technology issues, the legal and tax issues are readily understood and possible today under current law, even if the implementation is complex.

7.3 The Launch Phase

To implement this plan will require financial resources to support the organizational structure outlined above. Most of the financial resources that will yield the benefits under this plan have already been spent. The technology exists, the software exists, and the talent exists. What is needed now is to pull it together, to organize and align what already is available, adding what else needs to be added (e.g., specialized, scalable platforms and portals; trainers, etc.).

Nonprofits can make grants to other nonprofits and, in certain cases, to individuals. Nonprofits can sell products or services (as well as give them away), and the nonprofit may or may not have to pay taxes on the revenues. Nonprofit revenues are treated differently, for example, depending upon whether or not a particular activity is consistent with its IRS-approved mission.

Nonprofits can receive donations, and the donors may or may not be able to deduct those donations from their personal or corporate income taxes. Nonprofits may or may not be able to lobby the government. Nonprofits can own, in whole or in part, for-profit, commercial companies, as well as sell to, partner with, or otherwise work with for-profit, commercial companies. These possibilities depend upon a variety of factors, including the type of nonprofit, the particular authority granted to the nonprofit by the IRS, the nature of the activity and its relationship to the nonprofit's mission, and more.

There is also a small group of nonprofits that receive special designation or other authority, which does not necessarily include government funding, from the Federal or State governments. Recent news coverage has highlighted the government sponsored enterprises (GSEs) involved in the financial services arena, but there are many others, such as schools, the National Children's Museum, and the American Red Cross.

¹⁹ The terms "partner" and "partnership" have specific legal meaning about which lawyers can be very sensitive. (Many law firms themselves are specialized legal entities, called partnerships.) In this plan, however, these terms are used in a general collaborative sense and are not meant to imply a legally constituted partnership.

The initial funding for the launch phase of this larger endeavor must come from traditional sources, such as grant-making foundations, philanthropists, corporations, governments, and individual citizens. The amount of money needed to **launch** this endeavor depends upon the level of in-kind donations, but it is in the millions of dollars. It is not in the hundreds of millions, or the billions, or the trillions, which we now see in the newspapers every day. In short, it is comparatively a very small investment that will yield very large returns.

Continuing to provide technology-based educational services in the current manner will cost more and be less effective (e.g., in terms of reaching the neediest children) than the manner in this plan. Continuing a fragmented, duplicative approach may yield a few financial winners, but the nation and the children will be net losers. If the current economic crisis teaches us anything, it is that we must find new ways to achieve our traditional and cherished goals.

7.4 Sustainability

To make this effort self-sustaining, new methods of funding socially beneficial endeavors must be established. There must be new methods of sharing the costs for something that is good for society as a whole, like education. Not only does the individual student benefit, but society benefits from an educated populace and a skilled workforce. Every parent wants their child to be educated, and so does society. **The solution lies in developing new methods of cost-sharing and cost-shifting, which are based upon expanded notions of social responsibility instead of just cost-avoidance.**

The current public policy debate surrounding the economic crisis focuses on tax cuts vs. stimulus, Wall Street vs. Main Street, more government vs. less government, free markets and capitalism vs., nationalization and socialism, bailouts vs. rescues, and the like. This plan addresses none of these contentious issues. Instead, this plan proposes:

- New kinds of public/private partnerships with new notions of corporate social responsibility;
- New methods for people to share the costs of that in which they also share the benefits;
- New ways to shift the costs of socially beneficial activities; and
- New ways to use capitalism and free markets to fund the common good.

While government could create incentives to foster some of these ideas, or even mandate certain ones, all of the ideas in this plan are based upon **VOLUNTARY** cooperation and participation. These are new ideas for personal and corporate social responsibility. It is time to change the debate and to find new ways to cooperate and collaborate to fund and achieve the common good.

If the current approaches were working, we wouldn't be facing the challenges we're facing, and not just the financial challenges. The statistics on the sad state of our educational system cited at the beginning of this plan were from 2007, **before** the enormity of our economic challenges became apparent. We weren't teaching our children well before today. We weren't providing teachers with the tools and training they needed before today. And, we weren't funding education adequately before today. Something's got to change, but as John W. Gardner said,

Our problem is not to find better values but to be faithful to those we profess.²⁰

We don't need new values; we just need new ways of achieving and realizing our traditional values. But, unless we agree as a nation to adopt new ideas and approaches, we're doomed to repeat our past mistakes and perpetuate our prior approaches.

7.4.1 Cost-Sharing and Cost-Shifting

The concept of **sharing the cost** for something in the public interest is older than the nation itself. Taxes are **cost-sharing**. We all need roads, schools, and sewers, so we all pay taxes to a government entity, which undertakes to build and maintain

²⁰ "The Recovery of Confidence," John W. Gardner, 1970.

these facilities. In some cases, we also pay user fees, and in some cases, we find growing trends toward privatization, but the principle of sharing the costs of services and facilities for the common good still remains.

A different, although not totally unrelated, concept is that of **cost-shifting**. When our parents and grandparents purchased their first televisions half a century ago, they undoubtedly enjoyed and benefited from the programs they watched. But, they didn't pay the cost of producing or delivering those programs. Someone else, usually an advertiser, did. This is cost-shifting. Today, cost-shifting is widespread throughout our society.

Cost-shifting fundamentally involves someone "getting something for nothing." A first party ("A") produces or provides something; a second party ("B") consumes or benefits from that something; and, a third party ("C") pays the costs of that something. If left unchecked, cost-shifting is an unsustainable trend. It cannot go on forever. Someone has to pay. Sooner or later a threshold is reached, and then the arrangement collapses onto itself. We are seeing many examples of this today.

"Old media" (e.g., newspapers and news magazines) and many "new media" Web sites and services are based on cost-shifting to advertisers. The viewers, readers, users, or consumers don't pay all the costs. Now, these advertising-based businesses are having trouble, because the advertising revenues are not sustaining their costs.

In the television example, there was no "shared cost for common good." The advertising was a strictly commercial arrangement that has continued to evolve and expand. But today, in order to encourage and facilitate the change to digital broadcast television, the government is providing a subsidy to those television viewers who still have televisions that depend upon the same kind of over-the-air analog signals as those early televisions. In this example, a cost-shifting business model now involves cost-sharing as a matter of public policy. The times have changed in many ways beyond the technological evolution.

Perhaps one of the most significant by-products, at least in the technological world, of cost-shifting is that increasingly people **expect** services to be free of charge, while someone else pays the costs. Facebook (collaboration) is free. CNN (news) is free. Wikipedia (information) is free. YouTube (video) is free. Consider the ongoing debates about downloading and copying music, movies, and television shows. The list of examples is endless, and the debate can be very heated. Besides the obvious beneficiaries of cost-shifting, there are clear winner and losers. Someone still has to pay.

The point here is not to discuss the morality of cost-shifting, or to discuss the seismic shifts in the many sectors affected by newer forms of cost-shifting. Rather, the challenge is to find new strategies for cost-sharing and cost-shifting that will help us achieve the common social goal of free universal online educational services. (Many of these same ideas can be applied in other areas, as well.) Cost-shifting, in some form or another, is here to stay; it will not go away. We simply need to devise new ways to use it for publicly beneficial and socially valuable results.

7.4.2 Social Responsibility – Sharing the Benefits and the Costs

Unless we wish to continue as we have been, we cannot avoid taking a new view of our own responsibility. For companies, we need to go beyond our current notions of Corporate Social Responsibility. Instead, we must adopt the idea that a company should be more than a provider of products or services. A company must see itself as engine of innovation, financial growth, and public service, not just as a vehicle for making money for its shareholders with public service or corporate social responsibility as an ancillary mission.

A corporate citizen of the 21st Century must see itself as a pillar of our evolving society and it must accept that it shares a primary responsibility, with governments and schools, benevolent and charitable organizations, and individuals, for making the world a better place. Companies of the 21st Century share a stake in our common future. They are not apart from that future, and they must share their financial growth, and their knowledge and expertise, to help attain that future for us all.

Sharing the Benefits – Compassionate Capitalism

When a company succeeds, it should share at least some portion of that benefit, no matter how small, with the broader population for the public good. It should not be enough that the only beneficiaries are

the shareholders and investors, the employees and management, the customers and clients, and sometimes common good, represented by the government, through greater tax revenues. Instead, we should accept the fundamental notion that society – the common good – should also be a presumed beneficiary and should automatically benefit directly. This is both a moral imperative (nobility and fairness) and a practical way to use the mechanisms of capitalism and the free markets to achieve social good (utility and practicality).

In the same vein, individuals in a free, democratic society that embraces capitalism and free markets must accept that financial responsibilities and obligations happen every day, not just at tax time. Americans are a generous people, particularly in times of crisis and need, but the time has come to make social responsibility an everyday occurrence. Taxes are mandatory, and we must all pay them. Responsibility is voluntary, and we will all benefit from our shared responsibility.

Sharing the Costs – Compassionate Citizenship

When it's possible to pay for a benefit that we receive, we should pay at least something for that benefit, no matter how small, if we able. We cannot simply assume that others will always bear the total cost of our benefits. Instead, we should accept the fundamental notion that we, too, have a responsibility. This is both a moral imperative (nobility and fairness) and a practical way to fund mechanism to achieve social goals (utility and practicality).

These are principles. They can be implemented in many ways. This plan will suggest some ways, but there are many, many others. And, they are all **VOLUNTARY**. It's up to you.

7.5 Educational Content

There are vast amounts of “**Educational Content**” (a term that will be used to describe everything from static information to dynamic services, from reference material to software and apps) already available on the Web. While some is easy to find and use, much is difficult to find or use. And, as a practical matter, it's not universally available. This must change.

In order to make the Web a universally available and usable educational tool, there are several steps that need to be taken on an even broader, and more systematic, basis. Both students and teachers must be able to find out what's there, determine if they want to use it and then be able to do so, and finally provide feedback for others.

There are countless groups and organizations that can play lead roles in the tasks highlighted below, including, but of course not limited to:

- Colleges and universities – faculty and students
- Parent and teacher groups and organizations
- Technology companies and groups
- Content developers and publishers
- Citizen volunteers

Visualize college students, faculty, and staff – through various research projects, community outreach, and technology development – taking the lead in developing the tools, infrastructure, and courseware for the K-12 world. The following list is illustrative of the tasks that must be undertaken on a massive scale.

7.5.1 Identification

The first step in establishing an Open Educational Service is to identify the content either already available or needed for the service. There is already a great deal of educational content online. While there are some Web sites that organize some of their own content or content from other Web sites, most of the educational content on the Web is just “out there.” Using a traditional search engine to find this content is simply not practical. The initial task is to create an (ever-evolving) inventory of the content that is a candidate to be included under the umbrella of the Open Educational Service.

Then, the question becomes: who decides, and how do they decide, which content is actually made available. While this process may begin informally, ultimately a formal process must be established – a process that will involve various Boards, Councils, and Partners. Note, however, that this is question is limited to deciding what should be made available via the Service, not what should be taught, which remains the province of the teachers. Also, the content is presumably also available directly on the Web, whether or not it is included in the Service.

7.5.2 Organization

Once the initial batch of content is identified – and this will be an iterative process – it must be organized online in a way online that renders it usable, accessible, and findable. This is the development of the Portal, and there will ultimately be many Portals, with countless iterations of each. Students and teachers, parents and researchers, must be able to able to access the information and services in ways that make sense.

There are many Portals on the Web that index or otherwise make information and services available in meaningful ways. College and university students, teachers and technologists, have growing bodies of knowledge and experience in this area. Traditional search engines that rank information by popularity or paid advertising do not address this problem.

7.5.3 Integration

The development of the Platform must proceed in parallel with the development of the Portal, and in both cases this will be an iterative and interrelated process. Will the information or services that are indexed, for example, remain on their existing providers' Web sites? Will advertising be permitted? If a free version is made available, how will provision be made for the provider to sell enhanced or advanced fee-based versions?

Even if no content resides on other than on its providers' own computers, the computers required to host the Portals will grow into a substantial Platform. (Visualize a large library complex with many card catalogues each sorted by different a category, and with many copies of each catalogue to handle many simultaneous visitors, even if the “books” themselves live in other libraries and are somehow linked to the catalogues.)

7.5.4 Development

As we all know, the Web is an ever-evolving entity, not just in the amount and nature of information, but in the functional interconnections, the broad array of newly emerging services, and the integration of technologies, platforms, devices, and so on. How do developers produce new products and services in this model? How are these products and services integrated into the platform? (A developer would ask: “What are Application Programming Interfaces (APIs) to be used?)

7.5.5 Rating and Certification

Content on the Service must pass an important test. Do teachers and/or students find particular content to be useful and effective? Amazon lets people rate books. Users of the Web express their opinions in a variety of ways on many things. These processes are informal, but extremely important.

A rating system will help teachers and students choose the content they want to use. Just like on other sites where users post their comments on a product for others to use in deciding whether or not to buy it there should also be a comments section for content where teachers and students could post their assessment of the content. Would teachers or student recommend certain content to others? Or would they recommend not bothering with this content and then recommending other content to use. When confronted with several options for content, the users may find these comments useful in making their choice.

Unlike rating, certification is a formal process. Teachers, schools, schools systems, educational organizations, and the like have many formal rating and certification systems. This certification process may, for example, be based on a set of standards and criteria that have been formally established. Content that meets these standards might even display a seal of approval, or some other identifying mark.

The Portal must facilitate and display rating and certification, and content must also be searchable by a variety of rating and certification criteria. Find the math software approved by a particular school. Find the math software that is most popular with the students. And so on.

7.6 People and Skills

As important as the legal and tax structure is so is the nature of the organization itself: how it operates and how it behaves, how it is viewed and how it views itself, and how it relates to its myriad of affiliates, partners, and constituents, formal and informal. Simply stated, a bureaucracy won't work. Bureaucratic models, like the government, school systems, and rigid hierarchies of personnel, are doomed to failure.

This is a technology-based endeavor and the model must be a highly entrepreneurial enterprise. It must be agile in the marketplace of ideas and technology. It must appeal to the kids. This is a campaign, a movement, to rejuvenate our nation, revitalize the way we educate our children, and ensure that we provide all of our children with a quality education. It must have its own character, the character of America. As John W. Gardner said,

A movement to wake up America would have to be like the nation itself – not monolithic, not hierarchical, not dependent on a powerful charismatic leader rousing the masses, but upon leaders dispersed through all segments of society and down through all levels of the society, and upon an even greater number of vital and responsible citizens who don't necessarily think of themselves as "leaders" but are in fact sharing leadership tasks. It cannot be centrally directed or tidy. Local effort is essential. Local responsibility is crucial. ... This is such a time. The next America will be forged "out there" in America's Communities.²¹

People want to contribute to greater goals, higher purposes, and noble causes. People want to be involved. Not just young people, although they may have the most energy, but everyone. This plan harnesses the power of people, young and old, technically sophisticated or technically challenged, individual or corporate. If people can read, they can help in this effort.

There is a philosophy, an attitude, which this endeavor must tap. This plan contemplates a distributed organizational endeavor, with a comparatively small central staff. Success will depend upon partnerships, volunteers, collaborators, and affiliations. Sustainability will depend upon a shared belief that this effort is working, that it is succeeding at educating students and teachers. It must have a spirit, fostered by its structure and embodied in its people, wherever they work, whoever they are. They must be committed to the cause. As Peter Senge has said in describing the Entrepreneurial Spirit,

The committed person brings an energy, passion, and excitement that cannot be generated if you are only compliant, even genuinely compliant. The committed person doesn't play by the "rules of the game." He is responsible for the game. If the rules of the game stand in the way of achieving the vision, he will find ways to change the rules. A group of people truly committed to a common vision is an awesome force. They can accomplish the seemingly impossible.²²

There are untold numbers of people who would join the cause if given the opportunity. And, there are countless ways for them to help. Individuals who have strong technical skills can make a difference through the use of their time and skills to help design, implement and maintain the technical platform and portal, as well as the content itself.

- Open Services developers will provide the content for the Open Educational Services. An individual who specializes in math and games, for example, may be able to help develop a math component.

²¹ "National Renewal," John W. Gardner. John W. Gardner (1912-2002) was President of the Carnegie Corporation of New York and the Carnegie Foundation for the Advancement of Teaching; Secretary of Health, Education and Welfare (HEW); Chairperson of the National Urban Coalition; founding Chairman of Common Cause; founding Chairperson of Independent Sector; and recipient of the Presidential Medal of Freedom, the nation's highest civilian honor. [After his tenure, HEW was separated into two Cabinet Departments: the Department of Education (DoE) and the Department of Health and Human Services (HHS).]

²² "The Fifth Discipline," by Peter Senge, 1990

- Web designers will design and implement Web pages or portals that allow teachers and students to access the educational services.
- Content aggregators and indexers will collect and organize the content.

A company can give to the cause in many ways, but undoubtedly the most individually rewarding is through the company's own people. Beyond encouraging volunteerism, company can create a formal position, called an Educational Fellow, which would simply be an individual whom the company would provide to the cause for some period of time. The Fellow's activities would be based on the individual's interests, how that individual's skill could benefit the cause, and so on. The Fellow would still be an employee of the company and would still be on the payroll, but would be on loan at no expense to the cause. The cause would benefit in having the experience and knowledge of the fellow while the fellow and company would benefit with good will by giving back to the community they serve.

Students of all ages want to make a difference, and older students, especially college and university students, can help make a big difference. Students are close to the problem and view it from a different perspective. Students often provide a different insight into problems and solutions. Besides the cause benefiting from their contribution, students themselves will benefit from participating in this endeavor. Their participation can be formal (e.g., projects for academic credit) or informal (e.g., as part of extracurricular activities). Student can also gain practical experience in the field of their academic program and further develop those skills.

You don't have to be a student, Fellow or technically sophisticated person to help. It will take everyone to make this work. What can you do? There are many ways you can help.

- **Become a Champion** – As a champion, you can tell others about the cause. Spread the word so others will get involved. Help start the conversation on what needs to be done.
- **Become an Influencer** – Use your standing in the community to influence those who have the means to effect change.
- **Become a Contributor** – Besides contributing time and money, you can learn more about the effort and then find your own ways to help.

Everyone, from corporate Fellows to university students, from neighborhood volunteers to concerned citizens must help teach the teachers. While equity of access is one of the goals of Open Educational Services attaining that goal will involve more than just providing a platform to deliver or provide these services or creating a portal so that people can find and access these services. What is also needed is technical support and appropriate training for teachers. Teachers must have the knowledge to use technology – all technology and not just the Open Services platform envisioned in this plan – to its full advantage in the classroom.

There are many ways this issue is being addressed now, just as there are many ways in which children are being taught now. Yet, we know that we can do better. If there were ever an area in which volunteers could contribute to our educational system, this is it. There are many out-of-work people with the skills and backgrounds to help our teachers. There are talented university students with practical knowledge of the evolving Web. All it takes is a little creativity, initiative, and organization to bring these groups together for teacher training.

7.7 Companies

Private companies are the engine of growth of our economy. Along with colleges and universities, they drive innovation. They are the places where many of us spend our time and invest our energy. Whether large or small, companies are a centerpiece of our society. This plan assumes an expanded role for corporate America, and for the country's colleges and universities, because their assistance and contributions are essential.

Regardless of one's politics or views on the issues of the day, it is clear that our traditional institutions, operating in traditional ways, will not adequate to address our challenges. No matter how our financial crises (since we seem to have many) are resolved, it is increasingly clear that governments will not have the resources needed to adequately address many of the areas normally within the province of government – and nowhere is this more clear than in the area of

education. Our companies, and our colleges and universities, can help. With no judgment on the efforts to date, here's a list of places to start.

7.7.1 Support the Cause – Proud Sponsors

Corporate America must adopt the American educational system. This plan contemplates broad sponsorship by private companies, beyond their current efforts, beyond their financial contributions, and beyond the advertising model associated with the Web and online services.

Think of the Olympics. While there are a few companies that directly sponsor Olympic activities or associate their products or services with the Olympics, companies do not vie for positioning on the Olympics Web site. Certainly, companies vie for positioning on the television broadcasts, and even the new forms of online broadcasts, but in most cases, companies simply associate with the Olympic spirit, before, during, and after the event itself. In short, regardless of the technique (e.g., contributions, display of the Olympic logo, support for or promotion of the athletes, and so on.), companies are “Proud Sponsors of the Olympics.” It is time to call on companies to be “Proud Sponsors of Education.”

It is time for our children to know, and to be reminded constantly, that companies care about education, that learning is cool, and that their (our children's) future depends upon their success in school or other learning environments. Companies must contribute more to education (and the next subsections will suggest some thought-provoking ways), **and** they must lead a **cultural shift**. This goes beyond the cost-sharing and cost-shifting discussed above.

When it comes to education, our teachers need help, our schools need help, and our government needs help. This is not a value judgment or a criticism. It is merely an acknowledgement that the system is broken, because it is not producing the results – across the country, not just in selected areas or for selected populations – that we all want and that our nation needs.

7.7.2 Sharing the Results of Corporate Activity

While some products and services are intended to be free of charge from the onset, like Open Source software, or free public education for all, this is not possible in most cases. Individuals and organizations must make money. As noted previously, just because much of what we encounter on the Web is free to us, does not mean that are not real costs that someone must pay.

The simplest way to provide basic educational content free to all, while also providing some possible compensation for the provider, is to use the increasing popular **Free and Fee** model. Under this model, the provider makes available a free, basic version of the content, information, or service. Then, more advanced, enhanced, or robust versions are available for a fee. The underlying concept is simple: the “vanilla” version of something is free, and the other flavors are available for a fee.

There are many examples of, and also many variations on, this theme. Visualize basic versus premium cable. Or, some modest amount of online storage available for free, with more storage for a fee. Or, one service is available for free, but other services are provided for a fee.

Google provides many free services, but derives the bulk of its revenues from its search business, the cost of which is shifted to advertisers, so it too is free to users. Many content providers, from newspapers to more specialized companies, like the Discovery Channel and National Geographic, use similar models.

As an example of the free and fee applied to educational, visualize a content provider as providing two levels of content. At one level, the free basic educational content would be provided. This basic version would be provided to all who want to use it at no cost to the user. At the second level, a more enhanced robust version of the same content found in the basic version would be provided for a fee. The enhanced version would be more detailed with possibly more examples, test questions, and possibly some online support.

The Free and Fee model is actually an example of much broader principle of companies providing a small piece of what they do for free. The specifics of how this is done are not as important as the principle of **Sharing the Results** of a company's activities.

It is time to call on companies to adopt, *on a VOLUNTARY basis*, an expanded version of this model to support universal education. No matter what the company does, it should consider making at least some small portion of its products or services available free for educational purposes. This goes beyond the online world, which is certainly well along in adopting this principle. This principle covers everything.

A child cannot learn if he or she is hungry. What if each provider of (say) canned soup provided one pallet out of a thousand, or ten thousand, or whatever, free to be distributed for school lunches?

A child cannot learn if he or she does not have clothes to keep warm. What if provider of (say) apparel provided one pallet out of a thousand, or ten thousand, or whatever, free to be distributed to kids in need?

These and other examples like them are beyond the scope of this plan, but the principle is not. The online, information, software and services world is the leading the way in a truly profound, global change. Since information, services, and software can be replicated at minimal or no cost, and since the advertiser-based cost-shifting model is so prevalent in this industry, it's been relatively easy, at least for some companies, to take the lead in providing the end users with what appears to be "something for nothing."

Now, the broader application of this principle, at least as it applies to educational content, is becoming both morally and fiscally essential. Without such corporate contributions of a "small amount" of what they do, the costs of education will continue to be placed on governments and taxpayers, and the benefits will continue to be distributed unevenly and inequitably. This cannot continue, and this Free and Fee method is one of many ways (only some of which are described herein) to redistribute the costs, so that we all share them. Continuing to expect government to absorb these costs is not a realistic option.

7.7.3 Sharing the Rewards of Corporate Growth

Besides sharing their results or their output, companies can also easily shares the rewards of their performance, their growth. Companies routinely do this with employees, management, and board members. This plan calls for sharing the benefits of the capital markets (visualize the public equity or stock market here) for social good. There are many ways to accomplish this, but here's one that doesn't require any cash outlays.

A public company issues a warrant (just think "stock option")²³ to a nonprofit public charity. For the simplicity of this example, assume that the warrant is issued at the then-prevailing price of the company's stock. If the stock price rises within a specified period of time (usually a number of years), the nonprofit exercises the warrant and pockets the difference between the current stock price and the original warrant price. If the stock price goes down, nothing happens and the warrant is not exercised.

But who pays? Effectively, no one is paying (although the existing shareholders do experience a miniscule dilution). The value that is created comes from the growth (or the rebound) in the equity market, which means that the best time to do this is now, when the market is down. Here are the (simplified) details.

- There is no cash outlay required from the company issuing the warrant (sometimes called warrants).
- There is no debt that has to be repaid by the company, only public accounting, reporting, or bookkeeping requirements.
- The existing shareholders do experience a nonmaterial dilution in the value of their equity, just as they do when stock options are exercised. As a practical matter, the effect will be miniscule; the stock price will likely readjust as necessary; and the company's participation in the program may even be a selling point to the public.

²³ A warrant is similar to a stock option, but unlike an option, it is not issued in relation to corporate employment or service.

So, what is this? It is a breakthrough model for funding critical U.S. social capacity with miniscule upfront impact. Is it something for nothing? It can be viewed that way, but it's actually just the normal workings of the equity markets. Everyone is aware of the huge benefits that befall the fortunate few who are able to cash in stock options. (No value judgment is being made here.) This is simply a plan to provide similar benefits in the public interest. Society is the beneficiary, not individuals. **This plan amounts to stock options (in this case, warrants) for social good!**

All that is required for this to happen is for the Boards and Officers of companies to make it so. **Voluntarily.** If enough companies participate, as the capital markets recover this **Social Capitalism** will produce billions of dollars for socially beneficial causes, **at no cost to the contributing companies, no cost to the recipient nonprofits, and with negligible impact on the companies' existing shareholders.**

As an (oversimplified) example, in January, 2009, the average marketplace capitalization for publicly traded companies was roughly 50% less (i.e., price/earnings ratio of roughly 9 versus 18) than traditional levels. In the third week in January, 2009, the market capitalization of the top 25 U.S. companies was \$5 trillion dollars. If nonprofit public charities had warrants on one tenth of one percent (0.1%) of these top 25 companies and their stock prices were then to return to more traditional values (i.e., double), this would produce a \$5 billion-dollar infusion into the nonprofit sector, with no direct outlay required!²⁴

No taxes. No stimulus. No bailouts. No risk. No upfront cash. Just sharing the benefits of the capital markets. Just giving away something that doesn't cost a company anything to give. **Just Capitalism for the Common Good. Just Compassionate Capitalism.**

Why hasn't this been done before? Putting aside the administrative costs (minimal) and complexities, the answer that most people give is that there is simply no incentive for a company to do this, other than "good will" or "public relations." There is no tax deduction or credit. It's just a good thing to do.

Companies routinely give stock options to employees, management, and board members. Hasn't the time come to share the companies' success directly with the common good? This is different from paying corporate taxes, an extremely complex and controversial subject. This is more than a new kind of public/private partnership. This goes beyond corporate social responsibility. Just like a broad corporate commitment to education in America, this is new way of looking at looking the role of the corporation in society.

7.8 Colleges and Universities – Lead the Cause

College and universities, and other institutions of higher learning (collectively called "universities" herein), have a particularly important role to play in this endeavor. They must be more than contributors and supporters; they must be intellectual leaders. Universities have the academic credentials, the intellectual objectivity and neutrality, and the passion to be leaders of this endeavor. Working with parents, companies, teachers, and other interest groups and associations, universities can spearhead a revolution in K-12 education in this country. They can become champions and influencers in helping foster a new sense of social responsibility for their students, faculty, and alumni, and for the nation as a whole.

One important way to accomplish this goal begins with the students. The main responsibility of educational institutions is to educate their students and prepare them for the working world. This involves providing students with a variety of academic disciplines where they learn the necessary skills to excel in their area of interest. They are taught to be good community and corporate citizens. Internships, academic projects, community service, technology development, and work/study programs, are all examples of student activities that can be focused in these areas.

²⁴ In this example, the company is issuing a \$1 warrant for each \$1000 of its market capitalization, but any percentage can be used. Larger companies may wish to use a smaller percentage, and smaller companies may decide to use a larger percentage, or vice versa. Beyond the administrative costs, as in the case of employee stock options, the company spends nothing. Companies may also be inclined to donate equity (instead of warrants) to a nonprofit, but this subject is beyond the scope of this document.

But the impact of universities need not be limited to its student activities. Faculty can play major roles in program development, content creation and organization, community relations, teacher training, and many other areas. Students and faculty can unite in common cause and in harnessing the natural desire of youth and of academia to have a social impact.

And, the campaign need not stop there. This is a powerful cause around which to organize university's alumni. These alumni are now some of the same community, corporate, and even government leaders who are in a position to join this campaign, to contribute to this cause. This shared purpose can rejuvenate the alumni and strengthen their ties back to the university in pursuit of a larger purpose.

7.9 Contact Us

The Stargazer Foundation, which is spearheading the initial phase of this endeavor, is a U.S. (501)(c)(3) tax-exempt, nonprofit, public charity.²⁵

The most recent copy of this plan is available on the Stargazer Foundation Web site (www.Stargazer.org) under "Open Educational Services."

Individuals, groups, and organizations interested in assisting and participating in this effort should contact us at:

OpenServices@Stargazer.org

Donations should be made payable and sent to:

Stargazer Foundation
4031 University Drive – Suite 403
Fairfax, VA 22030

While we welcome offers of assistance and collaboration, we will not respond to:

- Requests for funding,
- Solicitations for commercial services, or
- Applications for employment.

²⁵ Initially chartered as a private operating foundation, the Stargazer Foundation was approved by the IRS to convert to public charity status in 2002. The Stargazer Foundation has completed its 5-year probationary period in 2007 and now files a 990 tax return, not a 990 PF. Unfortunately, many record-keeping organizations have out-of-date records and may still show the Stargazer Foundation as filing a 990 PF. This is incorrect, and corporate donors who access such out-of-date records should contact the Foundation for a copy of Foundation's IRS public charity designation letter or obtain a copy from the Foundation's Web site, www.Stargazer.org.

The Stargazer Foundation has committed its resources and infrastructure to launch this endeavor and is spearheading this effort under its current legal authority and tax status. Stargazer can accept donations of any kind from corporations, as well as from individuals, whereas many other types of nonprofits cannot. The Stargazer Foundation also has the authority to make grants to individuals, such as teachers (like the well know MacArthur Foundation), as well as to other nonprofits. (These grants to individuals are treated as taxable income to the recipient.) As a practical matter, it could take as long as a year to organize a new nonprofit with this same (and not provisional) authority and corporations would be unlikely to donate in the interim. (It is essential to develop very quickly at least some of the Boards and other entities and relationships described above.) Stargazer is committed to achieving, in the most effective way possible, the goals and objectives of this plan.

A Call to Greatness

Throughout our nation’s history, when the hour was late and the odds were long, or just when we needed to remember who we were as a people, our leaders have called us to greatness. Now, as in the past, we face great challenges, but we also can make this a time of self-renewal. We can make it a time of greatness.

It is time to rejuvenate our spirit. It is time to recommit ourselves to our basic principles, including equal educational opportunity for all. It is time to reassert our leadership role, both at home and abroad. If we do not educate our children, we will crumble from within. If we do not export our ideal of equal educational opportunities, we will not live up to our obligation to the world. The technology now makes it possible. Our will and our commitment will make it so.

Look back over our history. We are a nation of our great people, and we have continually reaffirmed our commitment to equality and renewed our faith in our people and ourselves for more than 230 years. Listen to what our leaders have said when they called us to the greatness within us. As the framers of our Declaration of Independence said,

We hold these truths to be self-evident, that all men are created equal, that they are endowed by their Creator with certain unalienable Rights, that among these are Life, Liberty and the pursuit of Happiness. ... And for the support of this Declaration, with a firm reliance on the protection of Divine Providence, we mutually pledge to each other our Lives, our Fortunes, and our sacred Honor.²⁶

We have fought a war amongst ourselves over these principles, and our principles won. As President Abraham Lincoln said,

Four score and seven years ago, our fathers brought forth upon this continent a new nation: conceived in liberty, and dedicated to the proposition that all men are created equal.

Now we are engaged in a great civil war ... testing whether that nation, or any nation so conceived and so dedicated ... can long endure. ...

The world will little note, nor long remember, what we say here, but it can never forget what they did here.

It is for us the living, rather, to be dedicated here to the unfinished work which they who fought here have thus far so nobly advanced. It is rather for us to be here dedicated to the great task remaining before us ... that from these honored dead we take increased devotion to that cause for which they gave the last full measure of devotion ... that we here highly resolve that these dead shall not have died in vain ... that this nation, under God, shall have a new birth of freedom ... and that government of the people ... by the people ... for the people ... shall not perish from the earth.²⁷

But remaining faithful to our principles and ideals, being our better selves, is not always easy. The task may be difficult at times, but we must never give up. As President Theodore Roosevelt said about “The Man in the Arena,”

It is not the critic who counts,
Nor the man who points out how the strong man stumbled,
Or where the doer of deeds could have done them better.
The credit belongs to the man who is actually in the arena,
Whose face is marred by dust and sweat and blood,
Who strives valiantly,

²⁶ The Declaration of Independence of the United States of America, July 4, 1776.

²⁷ “Address on the Battlefield near Gettysburg, Pennsylvania,” President Abraham Lincoln, November 19, 1863.

Who errs and comes up short again and again,
Who knows the great enthusiasms, the great devotions,
Who spends himself in a worthy cause,
Who, at the best, knows in the end the triumph of high achievement,
Who, at the worst, if he fails, at least fails while daring greatly,
So that his place shall never be with those timid souls who know neither victory nor defeat.²⁸

When President John F. Kennedy inspired and committed our nation on its journey to the moon, he knew that the challenge would be great. But, he urged us to forge ahead, to set our sights on the stars, and to embrace our own resilience and resolve. As President John F. Kennedy said,

We choose to go to the moon in this decade and do the other things, not because they are easy, but because they are hard, because that goal will serve to organize and measure the best of our energies and skills, because that challenge is one that we are willing to accept, one we are unwilling to postpone, and one which we intend to win ...²⁹

But victory always comes, if we persevere. No one old enough to remember, no one who watched Barack Obama take the oath of the highest office in the land, could fail to appreciate the history of the moment and the importance of perseverance. As Martin Luther King said in his speech on the steps of the Lincoln Memorial in Washington, DC,

And so even though we face the difficulties of today and tomorrow, I still have a dream. It is a dream deeply rooted in the American dream.

I have a dream that one day this nation will rise up and live out the true meaning of its creed: "We hold these truths to be self-evident, that all men are created equal."³⁰

This is an idea whose time has come: **Free, equal basic education for all – available online.** It is not a new idea; equal educational opportunity is an idea as old as our nation. But now we have the technical and the financial means to make it so. We must summon the will. We all can contribute to a better educational system. As President Barack Obama said in his first speech as our new President,

In reaffirming the greatness of our nation, we understand that greatness is never a given. It must be earned. Our journey has never been one of shortcuts or settling for less. It has not been the path for the fainthearted – for those who prefer leisure over work, or seek only the pleasures of riches and fame. Rather, it has been the risk-takers, the doers, the makers of things – some celebrated, but more often men and women obscure in their labor – who have carried us up the long, rugged path toward prosperity and freedom. ...

Now, there are some who question the scale of our ambitions – who suggest that our system cannot tolerate too many big plans. Their memories are short. For they have forgotten what this country has already done; what free men and women can achieve when imagination is joined to common purpose, and necessity to courage. ...

Our challenges may be new. The instruments with which we meet them may be new. But those values upon which our success depends – hard work and honesty, courage and fair play, tolerance and curiosity, loyalty and patriotism – these things are old. These things are true. They have been the quiet force of progress throughout our history. What is demanded then is a return to these truths. What is required of us now is a new era of responsibility – a recognition, on the part of every American, that we have duties

²⁸ "Citizenship in a Republic: The Man in the Arena," President Theodore Roosevelt, Given at the University of Paris, Sorbonne, on the way to accept the Nobel Peace Prize, April 23, 1910.

²⁹ "Address at Rice University on the Nation's Space Effort," President John F. Kennedy, September 12, 1962.

³⁰ "I Have a Dream Address," Martin Luther King, March on Washington for Jobs and Freedom, August 28, 1963.

to ourselves, our nation and the world; duties that we do not grudgingly accept but rather seize gladly, firm in the knowledge that there is nothing so satisfying to the spirit, so defining of our character, than giving our all to a difficult task.

This is the price and the promise of citizenship.³¹

This is not a matter of politics or party, rich or poor, young or old, black or white, or any of the other lines of division.

This is a matter of our principles and our obligations.

This is a matter of what is right and what is possible when we come together to produce a better life for all.

This is a matter of our children and our destiny.

This is a matter of our future.

YES, PRESIDENT OBAMA, WE HAVE ANSWERED THE CALL BEFORE –

AND WE WILL DO SO AGAIN!

WE WILL MAKE IT SO!

³¹ *"Inaugural Address,"* President Barack Obama, January 20, 2009.