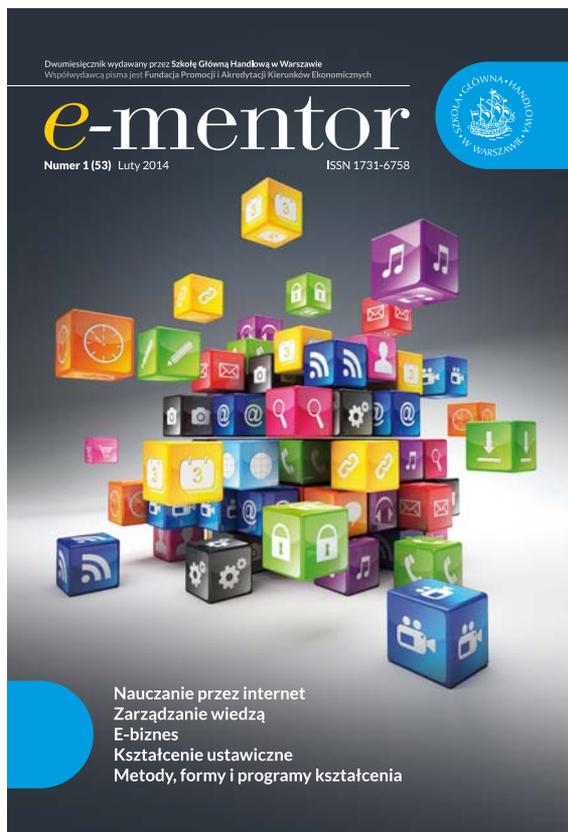


# e-mentor

DWUMIESIĘCZNIK SZKOŁY GŁÓWNEJ HANDLOWEJ W WARSZAWIE  
WSPÓŁWYDAWCA: FUNDACJA PROMOCJI I AKREDYTACJ KIERUNKÓW EKONOMICZNYCH

2014, nr 1 (53)



J. Sener, *Using the Seven Futures framework for improving educational quality*, „e-mentor” 2014, nr 1 (53), s. 92–97,  
<http://www.e-mentor.edu.pl/artykul/index/numer/53/id/1084>.



## Using the Seven Futures framework for improving educational quality

John Sener

### A spectacular opportunity

One of education's defining features is that it exists to a large extent in a constant state of tension between stasis and change. Education is an inherently conservative institution in many ways, for instance regarding its function of transmitting preserved societal knowledge and its legendary ability to resist rapid change<sup>1</sup>. At the same time, educational institutions are one of society's main ways of creating change through a variety of means such as groundbreaking research, discoveries, and ideas. Higher educational institutions are highly complex institutions which fulfill a multitude of purposes: employment preparation, social 'rite of passage,' knowledge generation, entertainment, economic mainstay, business partner, global outreach agent, and social change agent to name a few<sup>2</sup>. Higher education has become the main vehicle for individual economic change, particularly in the U.S. where a college degree has become practically the sole remaining path to a middle-class lifestyle<sup>3</sup>, although many observers argue that this reality is fading due to the shrinking of the middle class and the sharp rise in student debt in the U.S.<sup>4</sup> As the Education for All movement illustrates<sup>5</sup>, the ideal of education as a universal right which is essential to participating in the world's new knowledge economy and having the „individual power to reflect, make choices, and steer for a better life”<sup>6</sup> is a global phenomenon, even though it is not an evenly distributed one.

Despite education's legendary reputation for standing still, or at least changing so slowly that most observers don't even notice, change has long been an integral part of education. Not all opportunities for change are created equal, however. The present moment offers us a spectacular opportunity for change thanks to the confluence of two key factors: education power – education's newfound cultural importance as essential to the well-being of individuals and society – and cybersymbiosis – education's and society's irretrievable dependence on online and digital technologies.

This cyberization of education is happening on a variety of levels and for a variety of reasons. The Internet has become a pervasive learning resource and an indispensable resource for formal education activities, changing expectations about how we learn and how we educate. As we become ever more proficient at using Internet and other digital technologies for teaching and learning, we can also learn how to use these technologies to improve education by cyberizing it – taking a proactive role in shaping our use of digital technologies. If the first era of online education was defined by providing access, the emerging era can be defined in terms of improving quality – not just for online education but for all education. If we do this, we can take advantage of this spectacular opportunity to improve education in deep and lasting ways.

<sup>1</sup> J. Sener, *The Seven Futures of American Education: Improving Learning & Teaching in a Screen-Captured World*, CreateSpace, North Charleston SC 2012, pp. 2, 98.

<sup>2</sup> Ibidem, p. 60.

<sup>3</sup> A. Carnevale, N. Smith, J. Strohl, *Ready or Not: The Jobs Recovery and Educational Requirements through 2018*, The Georgetown University Center on Education and the Workforce, 2010, <http://www9.georgetown.edu/grad/gppi/hpi/cew/pdfs/fullreport.pdf>, [10.02.2014].

<sup>4</sup> *The Lost Decade of the Middle Class: Fewer, Poorer, Gloomier*, Pew Research Social & Demographic Trends, 2012, <http://www.pewsocialtrends.org/2012/08/22/the-lost-decade-of-the-middle-class/>, [10.02.2014]; K. Kamp, *By the Numbers: The Incredibly Shrinking American Middle Class*, Moyers & Company, 2013, <http://billmoyers.com/2013/09/20/by-the-numbers-the-incredibly-shrinking-american-middle-class/>, [10.02.2014]; M. Greenstone, A. Looney, *Rising Student Debt Burdens: Factors Behind the Phenomenon*, Brookings, 2013, <http://www.brookings.edu/blogs/jobs/posts/2013/07/05-student-loans-debt-burdens-jobs-greenstone-looney>, [10.02.2014].

<sup>5</sup> *Education For All Goals*, UNESCO, 2010, <http://www.unesco.org/new/en/education/themes/leading-the-international-agenda/education-for-all/efa-goals/>, [10.02.2014].

<sup>6</sup> J.R. Rischard, *High Noon: 20 Global Problems, 20 Years to Solve Them*, Basic Books, New York 2002.

---

## What does it mean to „improve educational quality?“

---

The notion of improving educational quality surely must be almost as old as the idea of education itself. A quick Internet search indicates a plethora of ways to define the term and related strategies in practice, from strengthening professional capacity<sup>7</sup> to test-based accountability systems<sup>8</sup> to community participation<sup>9</sup>. At first, such widely disparate definitions may suggest that it is impossible to reach any common understanding about what it means to improve educational quality. In reality, however, the opposite is true: it provides the opportunity to create a definition of improving educational quality whose value resides in providing a useful framework to make sense of the current context, accommodate multiple perspectives, and enable meaningful action.

### The Seven Futures framework

The cyberization of education is happening within a larger context. Most ideas about using technology to improve education focus on narrow, oversimplified outcomes. A closer examination of these ideas shows that they reflect the considerable influences of key forces which are trying to reshape education according to their own interests. At the same time, there are also fundamental shifts in the foundations on which education has been built for centuries.

Futurists spend little time trying to predict the future in precise detail; instead, they use scenario building and trend monitoring to try to ascertain alternative futures (the plural in „futures studies“) in more general terms and to imagine a preferred future<sup>10</sup>. This is the purpose of the Seven Futures framework: to imagine an alternative set of futures which supports a focus on improving education by cyberizing it through the use of digital and other online technologies. The Seven Futures assumption is based on the assumption that the three most important ways of improving educational quality are to: 1) focus on making things better; 2) incorporate the most influential forces that are shaping educational reform at the present; and 3) respond to the most relevant changes that are affecting education and society today.

### Focusing on making things better

A focus on making things better has the essential characteristic of change: moving from one condition to another, improved condition. It may seem patently obvious to some that improving educational quality requires a focus on making things better, but it often does not work that way in practice. Many educational initiatives and practices that claim to be of high quality (a very common attitude in higher education) are really focused on preserving the status quo. Irrespective of existing quality, an attitude focused on keeping things the way they are precludes a focus on improving quality.

Other initiatives focus on attaining equivalent quality relative to an existing standard. In online education, this commonly manifests itself with a concern about whether online courses or programs are as good as traditional ones. In the U.S., probably the best known related initiative was the No Significant Difference Phenomenon, a research project by North Carolina State University professor Thomas Russell, who compiled over 350 research reports and other papers which documented equivalent student outcomes between distance and face-to-face delivery modes<sup>11</sup>. Similarly, one of the guiding principles of the Alfred P. Sloan Foundation's online education initiative was that an online course or program should be equivalent in quality to the same or similar one offered on campus through traditional classroom delivery<sup>12</sup>.

Initiatives focused on quality assurance also fall short of this standard. At first, quality assurance efforts do focus on making things better in terms of bringing courses or programs up to a particular standard; however, once the standards are attained, the focus then shifts to assuring quality, i.e., maintaining the same level of quality rather than improving it. A focus on effectiveness also suffers from the same deficiency. Consider this analogy, for example: one expects an automobile to perform smoothly without incident whenever it is used (effectiveness), but one does not expect it to work better each time it is used.

### Incorporating the influential futures

The Seven Futures framework identifies the most prominent viewpoints which are described as scenarios whose advocates will influence the future of

---

<sup>7</sup> Introduction to IEQ, „The Quality Link Newsletter“ 1999, No. 1, pp. 1–3, <http://www.ieq.org/pdf/link2-1eng.pdf>, [10.02.2014].

<sup>8</sup> E. Hanushek, M. Raymond, *Improving Educational Quality: How Best to Evaluate Our Schools?*, [in:] Y. Kodrzycki (ed.), *Education in the 21st Century: Meeting the Challenges of a Changing World*, Federal Reserve Bank of Boston, Boston MA 2003, pp. 193–224, <http://www.bostonfed.org/economic/conf/conf47/conf47n.pdf>, [10.02.2014].

<sup>9</sup> M. Pradhan et al., *Improving Educational Quality through Enhancing Community Participation: Results from a Randomized Field Experiment in Indonesia*, 2013, [http://real.wharton.upenn.edu/~maisy/documents/WorldBank\\_SchoolCommittee.pdf](http://real.wharton.upenn.edu/~maisy/documents/WorldBank_SchoolCommittee.pdf), [10.02.2014].

<sup>10</sup> J. Sener, op.cit., pp. 63–66.

<sup>11</sup> T. Russell, *The No Significant Difference Phenomenon: A Comparative Research Annotated Bibliography on Technology for Distance Education*, IDECC, Montgomery AL 1999.

<sup>12</sup> F. Mayadas, *Testimony to the Kerrey Commission on Web-Based Education*, „Journal of Asynchronous Learning Networks“ 2001, Vol. 5, No. 1, [http://sc-d7.sloan-c-support.org/sites/default/files/articles/downloads/v5n1\\_mayadas\\_2.pdf](http://sc-d7.sloan-c-support.org/sites/default/files/articles/downloads/v5n1_mayadas_2.pdf), [10.02.2014].

cyberized education. These influential futures are as follows (also see Table 1):

**Table 1. The Influential Futures**

Future	Description
Free Market Rules	Formal education as we know it dissolves via market forces; business, efficiency win
Free Learning Rules	Formal education as we know it dissolves via anarchic forces; openness wins
Standards Rule	Formal education becomes driven by imposed standards; consistency wins
Cyberdystopia	Digital technologies diminish the humanity of education experience; nobody wins; humanity loses
Steady As She Goes	Incremental improvement, little changes; who wins?
Education Improves	Digital technologies improve the educational experience; everyone wins

Source: author

**Free Market Rules (Business Wins; Efficiency Works):** Advocates of this scenario assume that education is essentially a market-driven business, so applying market principles to education will improve it. Digital technologies will improve education by making it more efficient, businesslike. In its extreme version, market forces will cause formal education to transform radically or dissolve altogether.

**Standards Rule (Consistency Wins):** In this scenario, educational excellence is the collective attainment of uniform „rigorous” standards, so applying standardized practices to education will improve it. Digital technologies will improve education by making it more consistent through standardization. Great courses, great content, and uniformly measured accountability are the solution to education’s problems. In its extreme version, formal education becomes driven by the desire for the collective attainment of a single set of standards, with the ultimate aim being to attain consistent results.

**Free Learning Rules (Openness Wins):** Advocates of this scenario believe in openness – since open content and interaction are now freely available, making education open will improve it. Digital technologies will improve education by making it more open, enabling everyone to learn. In its extreme version, free learning will radically transform formal education or make it unnecessary, as open content and interaction eliminate the need for formal teaching and learning.

**Cyberdystopia (Nobody Wins; Humanity Loses):** Unlike advocates in the previous three camps, Cyberdystopians believe that the cyberization of education is an impending disaster. Digital technologies will ruin education by turning it into an efficiency-driven, inhuman, spirit-crushing dystopia. The previous scenarios are thus also Cyberdystopian nightmares: free market forces complete a hostile takeover of education, turning schools into glorified vocational training centers; the efficiency of standardized education removes all of its

humanity; and the availability of open content and open interaction simply hastens the devolution of education into an isolated, robotic experience.

**Steady As She Goes (Who Wins?):** Arguably, this scenario best describes education most of the time because education is durable, stable and thus resistant to change. Things also stay the way they are because everyone has a stake in stasis; most would-be reformers only seek selective changes while retaining the elements which benefit them. In this scenario, digital technologies are merely the latest New Big Thing; calls for major change will persist, but this too shall pass. Instead, education will continue to evolve slowly but steadily at most since incremental change is the kind of change that education does best.

Each of the above scenarios would be a disaster if fully realized, and their affect on the future depends on how we deal with each of them. The key to doing this effectively is to incorporating the influences of these influential forces into active, conscious, and strategic efforts to improve education by cyberizing it. This is the sixth future: Education Improves, a scenario where everyone wins through improving educational quality.

### Aligning with foundational shifts

The cyberization of society is accelerating shifts in the foundations on which education has been built for centuries: knowledge, access, and authority. These foundational shifts have numerous implications for learning and teaching.

**Redefining knowledge and its implications.** The very nature of knowledge itself is changing: where it resides, how it’s produced, categorized, transmitted, shared, and mediated, what the role of content is in a world of accelerated knowledge production. Steeped in traditional notions of knowledge, higher education has been especially slow to keep up with the implications of these changes. For instance, the proliferation of knowledge in visual and multimedia forms means that reading-based learning is no longer primary for some learners; students exposed their entire lives to media with higher production values in media find traditional text and lecture inaccessible and boring, while faculty are playing catch-up with acquiring multimedia skills. Now that students have instant in-class access to alternative knowledge sources online through a variety of mobile devices, faculty no longer have a knowledge monopoly within classroom.

**Redistributing access and its implications.** The redistribution of educational access from the privileged few to the ever-increasing many has changed society’s expectations about the importance of education and drastically changed key student characteristics. Students are far more diverse in terms of demographics, readiness, social capital, and learning styles; American student are also much more utilitarian about their education (i.e., job-focused), and the traditional campus designed around providing a „coming of age” experience is irrelevant for a much larger proportion of these students. The change in emphasis from providing instruction to producing results has had numerous policy

## Using the Seven Futures framework...

implications, for example a marked shift from enrollment-based funding models to results-based ones.

Renegotiating authority and its implications. The role structures of education are shifting from a model of imposed authority toward a self-initiated, negotiated, and shared model. Constructed, social, and ever-changing knowledge shifts the locus of control toward students, market forces, and cyberized education itself. Economically, technologically, and societally empowered students respond differently to authority figures; faculty and administrators sometimes fail to use negotiation skills and capitulate instead, as often happens when student satisfaction surveys are given too much weight in assessing faculty performance. Conversely, excessive concern about issues such as grade inflation indicate a failure to recognize that grading is less about sorting and more about assessing learner performance, which in turn requires a shift in traditional authority relationships.

### The Seven Futures framework and its international applicability

Although the Seven Futures framework is based on a book that is focused on American education, the framework itself can be usefully applied to higher education issues in other countries. For example, European higher education has also been increasingly influenced by „Free Market Rules” forces and for many of the same reasons. The trend to regard higher education as a tool for economic and social development and its massive expansion in recent decades has resulted in growing visibility of the role of markets and market forces in higher education. European governments have shown increased willingness to introduce market elements

in the regulation of higher education through policy initiatives and government intervention<sup>13</sup>. As in the U.S., European educational reform initiatives often reflect the multiple influences. For instance, the European Commission’s recently launched „Opening-up Education” initiative seeks to combine Free Learning influences through better utilization of Open Educational Resources (OER) and Free Market Influences by creating better „business models” for OER use<sup>14</sup>. Trends in redefining knowledge such as accelerated knowledge production, the interconnectivity of knowledge, and the multimedia revolution clearly have a global scope, as do the implications of redistributing higher education access to a larger audience. The rising economic, cultural, and communications power of youth is also expanding worldwide, as is the proportion of nontraditional students with substantial prior life and educational experience, requiring a renegotiation in traditional ways of teaching students.

### Quality improvement Seven Futures-style: the what and why

The Seven Futures framework contains two additional important elements: quality improvement strategies and quality improvement criteria.

#### Quality improvement strategies

The Seven Futures quality improvement strategies are not new ones for the most part; some have been around for a long time. What they share is that they reflect high aspirations for improving education, and they would improve education if they were adopted more widely. This menu of quality improvement strategies (Table 2) is a mix of ones featured in the

**Table 2. IEQ Strategies (Seven Futures page #s in parentheses)**

Learning and Teaching-Focused (Ch. 10)	Institutional-Focused (Ch. 11)
<ul style="list-style-type: none"> <li>• Learner-generated content (124–27)</li> <li>• Technohooks (136–37)</li> <li>• Human hooks: creativity, curiosity (135–36)</li> <li>• Event-anchored learning (127–29)</li> <li>• Social learning (128–30)</li> <li>• Individualized learning (130–33)</li> <li>• PLEs/PLNs (134–35)</li> <li>• Sensible assessment (137–41)</li> </ul>	<ul style="list-style-type: none"> <li>• Prior learning assessment (144–46)</li> <li>• Stackable credentials (152; 149–51)</li> <li>• More transparent education pathways (153)</li> <li>• Rethinking the credit hour as currency (154–57)</li> <li>• Supported opportunity/success (147–49)</li> <li>• Re-Empowering knowledge creation (157–61)</li> <li>• Sensible institutional assessment (161–66)</li> </ul>
Online Learning Delivery-Focused (Ch. 9)	New Ones:
<ul style="list-style-type: none"> <li>• Making the most of blending (119–20)</li> <li>• ‘Bricks and Clicks’: building a robust system (115–17)</li> <li>• Teaching online as faculty professional development (117–18)</li> <li>• Pioneering summer online programs (118–19)</li> </ul>	<ul style="list-style-type: none"> <li>• Affordable affordances</li> <li>• Adopting a Quality Improvement Program</li> <li>• Low-Cost Degree Program Models</li> <li>• Competency-Based Models</li> <li>• MOOCs</li> <li>• Flipping the Classroom</li> </ul>

Source: author

<sup>13</sup> P. Texiera, *The Tortuous Ways of the Market: Looking at the European Integration of Higher Education from an Economic Perspective*, London School of Economics, London 2013, <http://www.lse.ac.uk/europeanInstitute/LEQS/LEQSPaper56.pdf>, [10.02.2014].

<sup>14</sup> Open Educational Resources and Practices in Europe (OEREU), <http://is.jrc.ec.europa.eu/pages/EAP/OEREU.html>, [10.02.2014].

book (e.g., learner-generated content, prior learning assessment) and ones which have become more prominent since the book was written (e.g., MOOCs, flipping the classroom).

**Quality improvement criteria**

Determining what a quality improvement is and how one knows can be the most difficult part of moving forward with quality improvement efforts. The Seven Futures framework answers this question through a guiding assumption that any criterion which enables incorporating influential futures or aligning with foundational shifts will improve educational quality. Thus, (Tables 3, 4).

The Seven Futures quality improvement criteria thus provide reasons for selecting a particular quality improvement strategy as well as explanation or justification which can be further supported through various forms of evidence such as research studies, publications, anecdotal examples, case studies, or narrative explanation.

**A conceptual framework for moving to action on improving educational quality**

The Seven Futures framework is designed to enable educators to act on improving educational quality. It can be used to create a plan to implement quality

**Table 3. IEQ Criteria: Aligning with Foundational Shifts**

Realigning Education with Redefined Knowledge: (Chapter 2; 7F page #s in parentheses)
<ul style="list-style-type: none"> <li>• Connects knowledge within, outside of higher/K-12 education (pp. 15–16)</li> <li>• Connects knowledge across disciplines (p. 22)</li> <li>• Enables knowledge attainment in various shapes, sizes, timeframes (pp. 20–21)</li> <li>• Enables new knowledge generation thru cross-discipline connections (p. 22)</li> <li>• Enables distributed, contextual knowledge sharing (pp. 21–23)</li> <li>• Helps learners learn new knowledge as needed (p. 20)</li> <li>• Helps learners learn to use new tools for handling data explosion (pp. 19–20)</li> <li>• Makes knowledge attainment more measurable in meaningful ways (pp. 137–141)</li> <li>• Utilizes visual, multimedia, and digitized knowledge (pp. 24–25)</li> </ul>
Realizing Redistributed Access: (Chapter 3)
<ul style="list-style-type: none"> <li>• Serves previously neglected or underserved populations (pp. 28–30)</li> <li>• Expands access universally while preserving individual autonomy, dignity (p. 30)</li> <li>• Helps more learners live better lives in a knowledge economy (p. 30)</li> <li>• Reaches nontraditional students more effectively (pp. 31–32)</li> <li>• Accommodates more lifelong learners in an ever-greater variety of ways (pp. 32–33)</li> <li>• Increases chances of broadly defined student success (pp. 165–166)</li> </ul>
Managing Renegotiated Authority: (Chapter 3)
<ul style="list-style-type: none"> <li>• Shifts teacher-student authority relationships to shared, negotiated, self-initiated (p. 33)</li> <li>• Enhances teacher value, student value, and how they work together (pp. 33–34)</li> <li>• Creates a more transparent, accessible, and detailed certification system (pp. 152–153)</li> <li>• Strengthens the credentials/expertise connection by aligning it (pp. 152–154)</li> </ul>

Source: author

**Table 4. IEQ Criteria: Incorporating Influential Futures**

Standards Influences: (pp. 73–78)	Steady As She Goes, Cyberdystopian Influences: (pp. 91–96)
<ul style="list-style-type: none"> <li>• Increase use of collegial, peer-oriented, research-supported quality standards for course design, program improvement</li> <li>• Support broad, commonly agreeable standards which support more customized outcomes</li> <li>• Use a broader range of evidence-based practices</li> <li>• Expand the realm of acceptable outcomes thru standards sets, other structures</li> </ul>	<ul style="list-style-type: none"> <li>• Engage in realtechnik = acknowledge the costs of adopting new technologies</li> <li>• Recognize what needs preserving, protection from the transformations which new technologies bring.</li> <li>• Anticipate cyber education's possible ramifications; improve responses to emergent problems and issues.</li> <li>• Use incremental change to ease into quality improvement</li> </ul>
Free Market Influences: (pp. 67–73)	Free Learning Influences: (pp. 83–91)
<ul style="list-style-type: none"> <li>• Coevolve with business thru mutually beneficial products, services</li> <li>• Create a more collaborative, permeable knowledge creation process</li> <li>• Apply business practices judiciously (= improve education's business w/o destroying its culture)</li> <li>• Make smoother linkages between education and the work world</li> </ul>	<ul style="list-style-type: none"> <li>• Be formal education's foil: resource, innovation source, and recourse</li> <li>• Increase access to learning and education resources for learning and teaching</li> <li>• Increase student readiness for formal education</li> <li>• Reduce education costs via lower-cost resources, interactions</li> </ul>

Source: author

improvements in courses, programs, or even institutions. The task of improving the quality of higher education is a massive undertaking, but it is one that is necessary to do if we are ever to see a seventh future of education: a society where everyone's education truly matters.

## References

A. Carnevale, N. Smith, J. Strohl, *Ready or Not: The Jobs Recovery and Educational Requirements through 2018*, The Georgetown University Center on Education and the Workforce, 2010, <http://www9.georgetown.edu/grad/gppi/hpi/cew/pdfs/fullreport.pdf>.

Education For All Goals, UNESCO, 2010, <http://www.unesco.org/new/en/education/themes/leading-the-international-agenda/education-for-all/efa-goals/>.

M. Greenstone, A. Looney, *Rising Student Debt Burdens: Factors Behind the Phenomenon*, Brookings, 2013, <http://www.brookings.edu/blogs/jobs/posts/2013/07/05-student-debt-burdens-jobs-greenstone-looney>.

E. Hanushek, M. Raymond, *Improving Educational Quality: How Best to Evaluate Our Schools?*, [in:] Y. Kodrzycki (ed.), *Education in the 21st Century: Meeting the Challenges of a Changing World*, Federal Reserve Bank of Boston, Boston MA 2003, pp. 193-224, <http://www.bostonfed.org/economic/conf/conf47/conf47n.pdf>.

Introduction to IEQ, „The Quality Link Newsletter” 1999, No. 1, pp. 1–3, <http://www.ieq.org/pdf/link2-1eng.pdf>.

K. Kamp, *By the Numbers: The Incredibly Shrinking American Middle Class*, Moyers & Company, 2013,

<http://billmoyers.com/2013/09/20/by-the-numbers-the-incredibly-shrinking-american-middle-class/>.

F. Mayadas, *Testimony to the Kerrey Commission on Web-Based Education*, „Journal of Asynchronous Learning Networks” 2001, Vol. 5, No. 1, pp. 134–138, [http://sc-d7.sloan-c-support.org/sites/default/files/articles/downloads/v5n1\\_mayadas\\_2.pdf](http://sc-d7.sloan-c-support.org/sites/default/files/articles/downloads/v5n1_mayadas_2.pdf).

Open Educational Resources and Practices in Europe (OEREU), <http://is.jrc.ec.europa.eu/pages/EAP/OEREU.html>.

M. Pradhan et al., *Improving Educational Quality through Enhancing Community Participation: Results from a Randomized Field Experiment in Indonesia*, 2013, [http://real.wharton.upenn.edu/~maisy/documents/WorldBank\\_SchoolCommittee.pdf](http://real.wharton.upenn.edu/~maisy/documents/WorldBank_SchoolCommittee.pdf).

J.R. Rischard, *High Noon: 20 Global Problems, 20 Years to Solve Them*, Basic Books, New York 2002.

T. Russell, *The No Significant Difference Phenomenon: A Comparative Research Annotated Bibliography on Technology for Distance Education*, IDECC, Montgomery AL 1999.

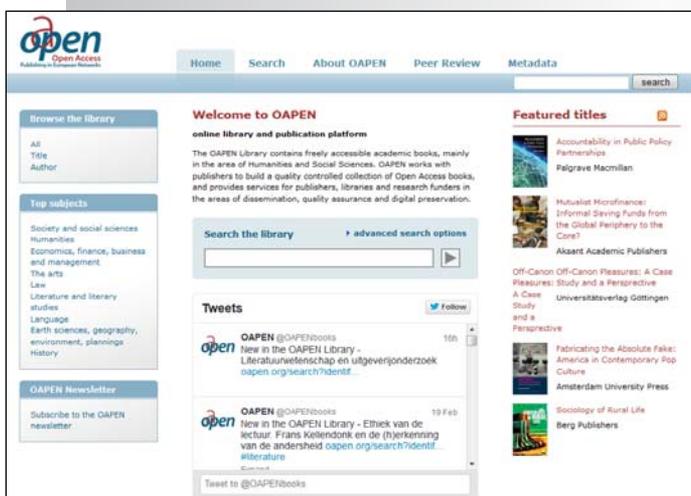
J. Sener, *The Seven Futures of American Education: Improving Learning & Teaching in a Screen-Captured World*, CreateSpace, North Charleston SC 2012.

P. Texiera, *The Tortuous Ways of the Market: Looking at the European Integration of Higher Education from an Economic Perspective*, London School of Economics, London 2013, <http://www.lse.ac.uk/europeanInstitute/LEQS/LEQSPaper56.pdf>.

*The Lost Decade of the Middle Class: Fewer, Poorer, Gloomier*, Pew Research Social & Demographic Trends, 2012, <http://www.pewsocialtrends.org/2012/08/22/the-lost-decade-of-the-middle-class/>.

The author is founder/CKO of Sener Knowledge LLC. He runs a consulting practice which co-creates knowledge leading to positive change in education, learning, and society. His career in education and training over the past 30 years is a unique mixture of broad practical experience and academic expertise. His extensive involvement in online education (since 1994) as an evaluator, project director, strategic planner, and knowledge developer includes long-term relationships with the Sloan Consortium, Quality Matters, and National University Technology Network communities. He holds a M.S. degree in Education from Johns Hopkins University and a B.A. in Psychology from Oberlin College.

## POLECAMY



## OPAEN: Open Access Publishing in European Networks

OPAEN to non-profitowa fundacja, której celem jest wspieranie otwartego dostępu do publikacji akademickich. W jej serwisie internetowym tworzony jest zbiór tekstów, głównie z obszaru humanistyki i nauk społecznych (ponad 1500 pozycji), ale także z ekonomii (ponad 200), prawa czy geografii. Książki można łatwo wyszukiwać i zapisywać w formie PDF. OPAEN współpracuje też z wydawcami, bibliotekami i fundatorami badań naukowych w celu udostępnienia wyników, zapewnienia jakości oraz tworzenia odpowiedników cyfrowych publikacji. Więcej informacji można znaleźć na stronie: <http://www.oapen.org/home>.