









# EDITORIAL

BY JORGE SÁ COUTO

## TOGETHER WE CAN INSPIRE KNOWLEDGE

Over the course of its 23-year existence, JP-inspiring knowledge has shown its ability to accept and overcome the toughest of challenges.

In the 80s, we were the first Portuguese company to challenge technical assistance in a serious manner and at the time became a local benchmark. In the 90s, we were the first company to present a balanced line of desktop computers in Portugal, which turned us into a regional benchmark. In 2002, we were the first Portuguese company to build a portfolio consisting mainly of mobility products, thus becoming a national benchmark. Finally, in 2008, we were the first company to present a notebook with a design especially geared towards Education. This, turned us into a worldwide benchmark.

Today, JP-IK, inspiring knowledge throughout the world, is called upon by several countries to design educational projects based on technologies, and to implement the most appropriate solutions to each region.

Today, JP-IK, inspired by the knowledge attained from all around the world, competes on equal terms with any other name in this industry, and challenges the larger entities who have yet to see that the world changes every day.

Today, JP-IK, inspiring the knowledge of the network of partners it has throughout the world, fights a fear-some battle to ensure that all children have equal opportunities in their access to knowledge.

Today, JP-IK continues to be fearless in venturing towards wherever necessary to provide the right to education to those who are most in need. For this reason, it takes Educational pilot-projects to regions such as Zambia, Timor or Ghana.

Today, JP-IK is recognised worldwide as an undeniable reference in the field of information technologies dedicated to Education, not only for its innovating products, but also for its creativity in searching for new educational solutions that meet the needs of each country.

Today, JP-IK receives international awards for the innovation it brought to large-scale educational projects, ranging from the Plan Ceibal in Uruguay to the Conectar Igualdad program, in Argentina.

Today, JP-IK remains a Lusitania company that is recognised around the world, and has a great sense of pride that Portugal has been a pioneer in this area.

Today is the day to thank all members of JP-IK for their magnificent work over the years, and to invite them all, without exception, to accept this new challenge.

Today is the time to look towards the future and seek the best way of giving all students all around the world the maximum quality in learning, preparing them for the new and demanding challenges of the twenty-first century.

**JP-inspiring knowledge.  
Together we can inspire knowledge.**

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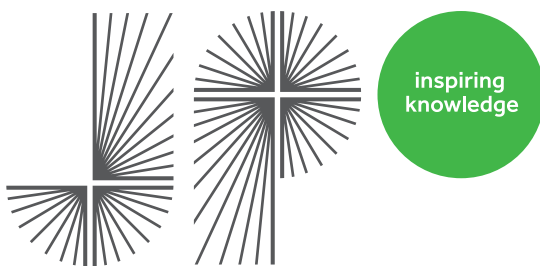
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**Intel® Learning Series**  
Advancing Education Worldwide  
Education Solution Provider



JP SÁ COUTO HAS CHANGED. WE ARE NOW JP - INSPIRING KNOWLEDGE, EMBRACING A BRAND NEW IMAGE THAT FITS OUR PERMANENT MISSION: TO DELIVER PURPOSE-BUILT SOLUTIONS FOR EDUCATION, THROUGH ICT PRODUCTS AND SERVICES THAT FOSTER HUMAN DEVELOPMENT.



# JP-INSPIRING KNOWLEDGE: NEW BRAND, THE SAME COMMITMENT

2012 was a remarkable year for our company. We are present in all five continents, with a vast network of local partners that are now spread over more than 70 countries. The number of mgseries netbooks distributed worldwide grew to 4 million. So, that means that about 8 million children have access to an educational netbook. And we did not stop here, achieving another significant milestone: the international recognition of our role in educational projects, with two innovation awards.

After 23 years, we thought it was the perfect time for a change.

JP - INSPIRING KNOWLEDGE COMES AS AN AFFIRMATION OF OUR WORLDWIDE PRESENCE, AS A COMPANY WITHOUT BOARDERS, INSERTED IN A GLOBALIZED SOCIETY.

With a fresh look, JP-inspiring knowledge is strengthening its strategy for growth and internationalization over time, in a consistent and coherent way.

We want to build a brand that is a differentiating factor and a key to the success of our presence in the globalized world, as value creation for our customers and partners.

> "IT IS OUR AIM TO BECOME LEADERS IN INNOVATION AND SERVICE, TO BE RECOGNISED AS TECHNOLOGICAL PARTNERS OF REFERENCE IN BOTH NATIONAL AND INTERNATIONAL MARKETS. WITH THE INTRODUCTION OF THIS NEW BRAND, WE AIM TO PASS ON A GLOBAL IMAGE. AN IMAGE THAT WILL SHOW WHO WE REALLY ARE." <

Jorge Sá Couto, Chairman of JP-inspiring knowledge

With this new brand, we intend to continue our journey, offering the best and most innovative knowledge integrated solutions. A knowledge that will have no age or boundaries, and that will reach the entire World.

## INSPIRING KNOWLEDGE

**"Inspiring knowledge" is the central idea around the new brand. It reflects the ambition to transform society and promote human progress through technology, opening doors to knowledge, triggering the passion for knowledge, fostering the appreciation of each person, group or society.**

We know that knowledge determines human behaviour. Knowledge opens the door to life, the world, the universe.

It opens new horizons to thought and action, it boosts creativity, it highlights new paths and makes the impossible wish come true. Knowledge gives us the freedom to be who we want to be. And above all, knowledge awakens the desire to learn, to always find out more, because knowledge is enticing, captivating and inspiring...

> FOR ALL THIS WE WANT TO OFFER THE BEST AND MOST INNOVATIVE KNOWLEDGE INTEGRATED SOLUTIONS.

> AND BECAUSE KNOWLEDGE BEARS NO AGE, WE WANT TO OFFER "KNOWLEDGE" TO ALL AGES.

> AND BECAUSE KNOWLEDGE HAS NO BOUNDARIES, WE WANT TO BE EVERYWHERE IN THE WORLD.

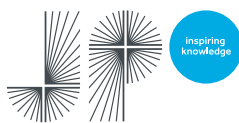
> WE WANT TO BE LEADERS, RECOGNISED AS REFERENCED TECHNOLOGY PARTNERS AT A GLOBAL LEVEL.

## BUILDING THE NEW BRAND

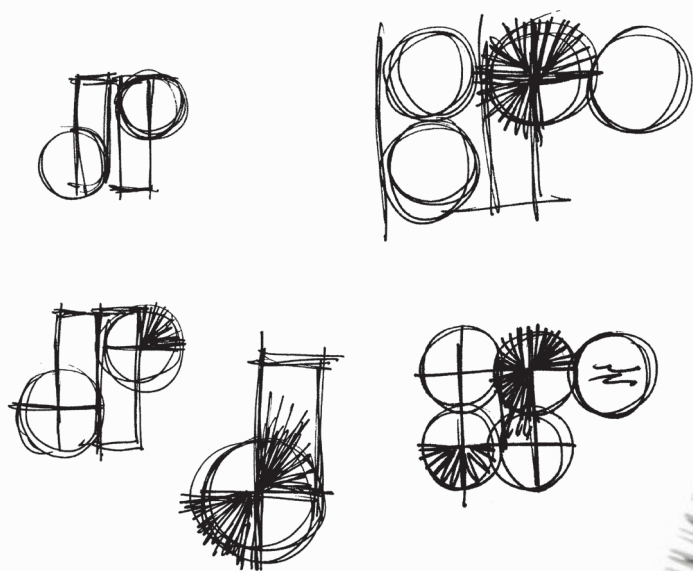
The new brand "JP-inspiring knowledge" is the result of a strategy of growth and internationalisation defined by the company. It is a sign of evolution and the beginning of a new stage.



The name "JP Sá Couto" was simplified, now focusing on just the "JP" - easier to implement in a global market.

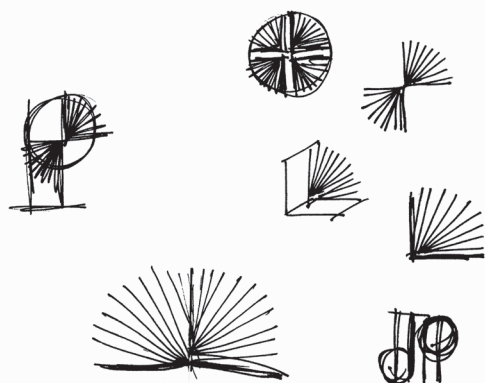






The design of the letters "JP" is done through flexible modules, which are adapted so as to give life to the two letters.

The graphic expression of the modules was inspired by open books and in the motion used when opening a laptop, metaphors which express the opening up to knowledge and to new horizons.



The effect created by the multiple radial lines projects the idea of innovation and creativity, pointing out several paths to knowledge.

The circle supporting the signature elevates, to a global scale, our ambition in promoting knowledge belonging to everyone, and to humanity as a whole. The circle takes on four different colours, each corresponding to one of the four areas of the JP-inspiring knowledge brand:

- Institutional
- Education
- Distribution
- Social Responsibility

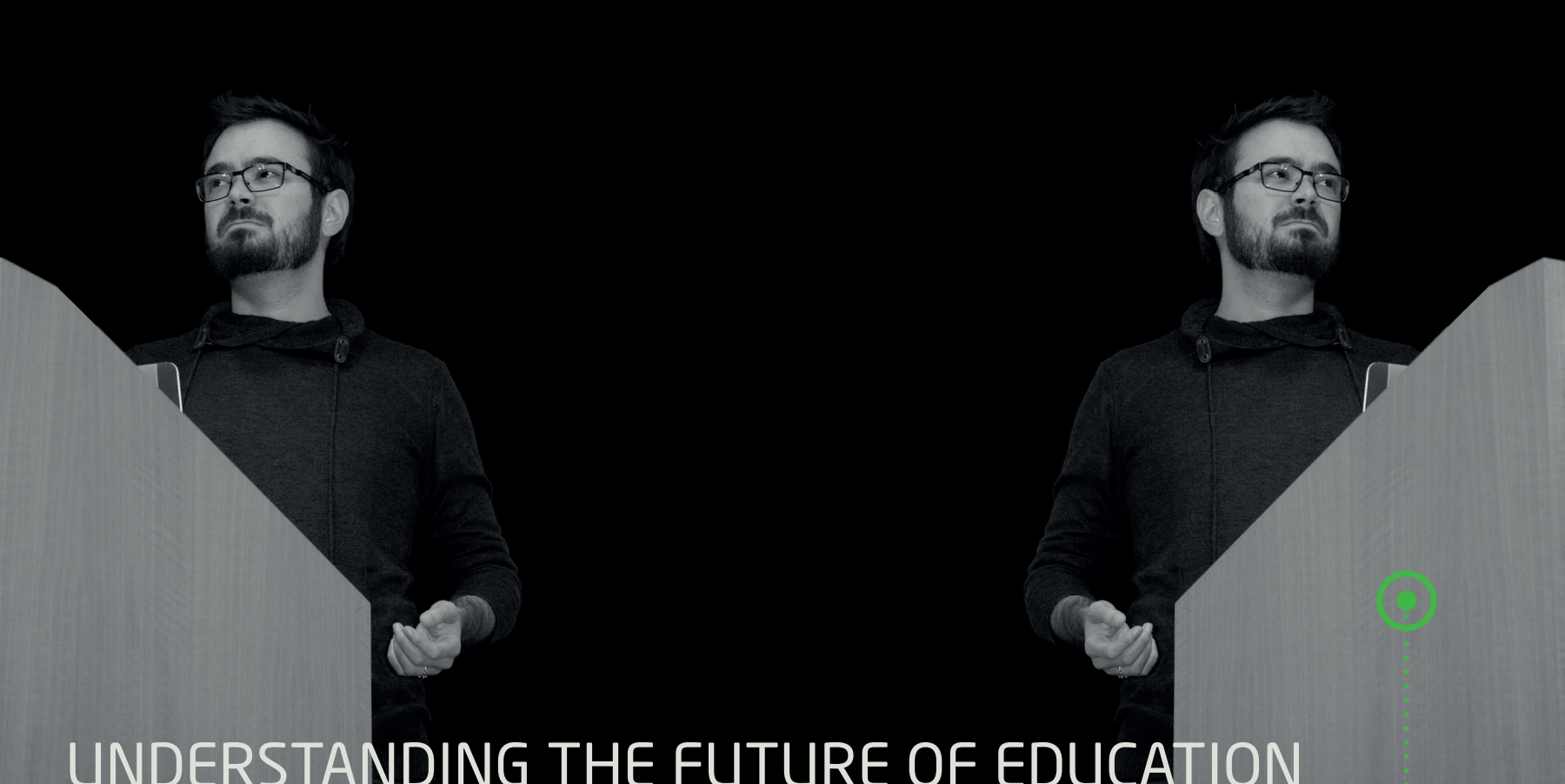
## THE FUTURE

We are committed to open doors to knowledge, inspiring the passion for learning, despite cultural, social and economic differences. JP is able to help every country giving their students the best tools for Education: new technologies can take learners anywhere, stimulating their creativity and intellectual development. This means enabling people to become capable of innovating, changing their own future and the world's future.

Now more than ever, we are ready to face the 21<sup>st</sup> century challenges, inspiring knowledge all around the world.







# UNDERSTANDING THE FUTURE OF EDUCATION FROM A TECHNOLOGICAL PERSPECTIVE

BY MICHELL ZAPPA

Why look at the future of technology in education? Because education holds a responsibility with society to anticipate the real-life skills students will need throughout their lives - and technology fundamentally underpins the disruption in tools learners will need to deal with an increasingly complex future. Educational methodologies tend to be formalized only after professional practices have been defined: the first true engineering students graduated only after many bridges had been built. And the first doctors received their diplomas after many corpses had been dissected and diseases cured.

With technology, however, that dichotomy is different. Fast-paced innovation and perpetual change in areas pertaining to emerging technology creates a scenario where the master needs to keep abreast with ongoing changes to remain ahead of their students. Computer science, while sometimes offered in a traditional context of classrooms and teachers, is most often taught between peers online. Programmatic problems that did not exist five minutes ago are posed and resolved on forums, where the roles of teacher and student become interchangeable.

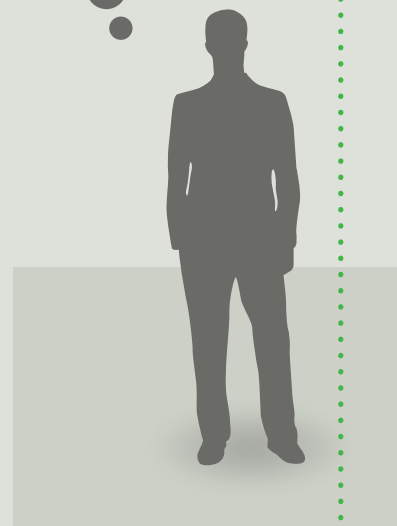
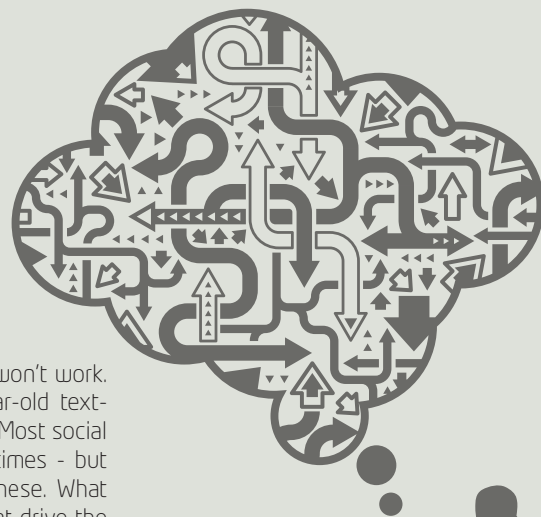
This decentralized mode of ad-hoc teaching is the driving force behind accelerating change, but might also offer the solution for us to keep on top these rapid revolutions. When Biology class starts moving into Biotechnology, or when Physics turns computational, or when lessons in Ethics are complemented

with lessons in Privacy, the old models won't work. Relying on decade-old information, year-old textbooks or month-old articles won't work. Most social fundamentals will not change in our lifetimes - but school faces no difficulty in teaching these. What will change is the surface, the mores that drive the expectations of younger generations. The way in which they adopt and adapt new technologies without letting these changes uproot their values.

As an educator, knowing exactly what is changing, but also where things are likely to be heading becomes doubly important: to keep up with the culture of students, but fundamentally to help guide them through such rapid changes.

If, as an educator, you find yourself mixing up Facebook with FaceTime - or mistaking Twitter for Tumblr, know that the revolutions are only just beginning.

This visualization attempts to demonstrate a series of emerging technologies that are likely to influence education in the upcoming decades. Despite its inherently speculative nature, the driving trends behind the technologies can already be observed, meaning it's a matter of time before these scenarios start panning out in learning environments around the world.



(Michell Zappa is a global emerging technology strategist. His research develops plausible scenarios by drawing on current trends, technological imperatives and a degree of Sci-Fi inspiration. He works to guide both corporations and public institutions in making better decisions about their future.)

# Envisioning the future of education technology

Education lies at a peculiar crossroad in society. On one hand it has the responsibility of anticipating real-life skills by preparing us for an increasingly complex world – but education methodologies can only be formalized after practices have been defined. This dichotomy is particularly aggravated when it comes to technology, where fast-paced innovation and perpetual change is the only constant.

This visualization attempts to organize a series of emerging technologies that are likely to influence education in the upcoming decades. Despite its inherently speculative nature, the driving trends behind the technologies can already be observed, meaning it's a matter of time before these scenarios start panning out in learning environments around the world.

## Classroom

The prevailing paradigm of a single teacher addressing dozens of students unidirectionally in a physical setting.

## Studio

Peer to Peer learning environments where groups coalesce to discuss, learn and solve problems with each other and the teacher serves as a facilitator.

## Virtual

Disembodied environments, where learning, discussion and assessment happen regardless of physicality or geography.

2012

Today, technology is fixed and centralized, either in a computer lab or within the classroom.

1

Rather than considering IT a standalone tool or skill, digitization tends to disperse throughout every facet of the classroom.

DIGITIZED CLASSROOMS

2020

As classrooms digitize, students are free to collaborate with peers globally.

3

Comparatively, in studios and virtually, we see ubiquitous, mobile use of technology.

2

Undoing the traditional teacher-student model, these technologies offer a scenario where AI handles personalization while teachers focus on teaching.

DISINTERMEDIATION

Classrooms, as physical teaching models, tend to be replaced by studios and virtual teaching modes.

4

Instruction becomes project-performance- and portfolio-based instead of traditional assessments.

5

2030

Over time, education becomes a continuous, interconnected effort, allowing students to cope with a perpetually changing world.

6

Bridging the online-offline gap, these future technologies offer a potential future where embodiment is secondary to information access.

VIRTUAL/PHYSICAL STUDIOS

65% of today's grade school kids will end up at jobs that haven't been invented yet

United States Department of Labor: Futurework - Trends and Challenges for Work in the 21<sup>st</sup> Century

2040

# IN EVERY MG SERIES EQUIPMENT ONE COMPLETE SOLUTION

Intel® Learning Series

Advancing Education Worldwide

Education Solution Provider

JP-inspiring knowledge prides itself on offering an affordable all-in-one solution for Education in each mgseries equipment. As our company's vision, our products take a holistic approach on teaching and learning, with child-safe hardware and software specially designed for Education.

JP-inspiring knowledge is the only company in the world authorized by Intel to change the design and key features of Intel Classmate PCs.

Our family of products grows as we find new ways to meet all levels of knowledge and educational needs. JP-inspiring knowledge is con-

stantly evolving and we look for the best partners to develop better and better solutions for the classroom.

Now you can learn more about what is new on the mg series offer, from the devices to the educational software, contents and applications.

## MG SERIES DEVICES



### PUPIL 103 CLAMSHELL

Created to educate for the future

The Pupil 103 proves that we are not satisfied with existing resources for learning. Innovation in design, safety and resistance of the equipment and the performance efficiency make Pupil 103 the ideal tool for children to attain further knowledge. We design the path of evolution.

The better the product, the higher the learning.

#### Key Features:

- Safe: design based on round edges, with no sharp points
- Robust: enhanced water resistance C-face and anti-trip power cord
- Ergonomic: visible USB input icons and quick launch button

Read more on **mgZoom4** or at [www.pupil103.mymagalhaes.com](http://www.pupil103.mymagalhaes.com)

### PUPIL 104 CONVERTIBLE

Smart Learning

The Pupil 104 takes Education three steps further, with a notebook, a tablet and an e-book reader. All in one machine.

The convertible MGseries computer provides a world of new possibilities. Learning is personalized and while reading, writing or drawing, the student interacts directly with the content.

#### Key Features:

- Writing: ergonomic pen and "note taking sw" app
- E-reading: small-size device with "e-reader scroll control"
- Collaboration: 270° rotating webcam and dual slot for headphones

Read more on **mgZoom4** or at [www.pupil104.mymagalhaes.com](http://www.pupil104.mymagalhaes.com)

### ANY 201

Learning anytime, anywhere, anytime

Education gets personal like never before with the new ANY 201. Small in size, light in weight, but huge in possibilities, this education tablet accompanies the pace of each learner. Now, there are no doubts: children get answers in their own hands.

From the class to the playtime, ANY 201 is the learning companion at all times, anytime.

#### Key Features:

- Child-resistance: design based on round edges and a protective rubber cover
- Book-sized tablet with light sensor and dual webcam
- Dedicated software: Intel Learning Series Software Suite and Android 3.0 HoneyComb

Read more on **mgZoom4** or at [www.any.mymagalhaes.com](http://www.any.mymagalhaes.com)



### TUTOR 1002

Designed for teachers, focused on learning

To inspire young minds, educators need the vocation but also the best teaching tools. Tutor 1002 is the ideal solution to empower teachers and engage students.

Combining a professional exquisite design with what is best in Intel's software purpose-built for Education, Tutor 1002 fits perfectly into 1:1 eLearning environments.

#### Key Features:

- Stunning Look: thin-and-light design
- Safe content: the on-board TPM enables protected storage and secure communication
- 6-in-1 card reader

Read more on **mgZoom4** or at [www.tutor.mymagalhaes.com](http://www.tutor.mymagalhaes.com)



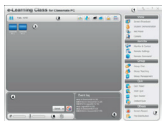


## MGSERIES EDUCATIONAL SOFTWARE

The mgseries Educational Solutions offer quality content and applications "out of the box", that will help young learners to develop essential skills to face an ever growing and fast changing World. We are talking about 21<sup>st</sup> century abilities like critical thinking, collaboration, problem solving, and social skills. As soon as they receive our Education Solutions they are ready to explore and to create, ready to play and to collaborate, regardless of Internet connectivity.

However, the whole school community benefits from the mgseries educational software, with applications and programs specially designed for parents, teachers, IT Administrators and IT Staff, and large-scale deployments.

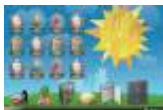
### For Teachers



Classroom Collaboration (Mythware)



Access Management

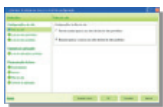


Education Desktop

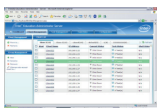
### For IT Administrators and IT Staff



Asset Management (Theft Deterrent)



Access Management



Platform Management

### For Students



MagAppBar



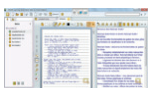
Foxit Reader



Stretch Break for Kids



Digital Literacy Curriculum



Note Taker



Pen Input



Wikipedia Offline Reader

## MGSERIES EDUCATIONAL CONTENTS: WHAT IS NEW\*

It is no news that kids enjoy technology and are fond of interactive, meaningful, rewarding and funny software. However, some requirements shall be met. Contents must include images, color, video, movement but, above all, they must be related to their knowledge and daily experiences. A character that guides the exploration of the app is also a very important element (concerning ages from 6 to 11 years old). Play and Lear is the best "receipt" to capture their attention and interest.

JP-inspiring knowledge has now an exclusive collaboration with Take The Wind, offering a unique full product solution, featuring the applications "Enerhome" and "My Body in 3D".

A multidisciplinary team with expertise on Development Psychology, Education, Design and Multimedia got together to develop enriched interactive tools to use at school or at home. Characters and contents were created according to their needs and abilities, but also considering school curriculum. And, above all, this software meets JP-inspiring knowledge philosophy, while promoting the sustainability policies for man and nature.

## ENERHOME

This software explores Energy and Energetic efficiency, from a child perspective. First, they can learn all about the way energy is produced, how does it get to our homes, how climate and environment conditions influence it, and a lot more (animated videos will take them to a trip to different kind of energy sources). Then, they will be able to understand why should they save energy and use it in a most efficient way. Many useful tips to save energy at home or school are also available. Last but not least, they can measure their energy consumption and evaluate how much they have been able to save! Quizzes and other kinds of games help testing what they have learned.

## MY BODY IN 3D

This software explores the Human Body and all its systems and functions. Animated 3D videos help kids understand how everything works, according to school curriculum. A very friendly nurse helps them apprehend the contents and also teaches a lot of curious things about human body. This application is very easy to use, being supported by voice.

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\* Software available from October 2012





Source: <http://www.flickr.com/photos/worldbank/>

# LEARNING FOR ALL - WORLD BANK GROUP, EDUCATION STRATEGY 2020

## INVESTING IN PEOPLE'S KNOWLEDGE AND SKILLS TO PROMOTE DEVELOPMENT

For 48 years, the World Bank Group has been contributing to educational development around the world, with more than 1500 projects and an investment of \$69 billion in Education.

"Learning for All" is the title of World Bank Group's Education Strategy 2020, that presents the key solutions for improving the education system, outcomes and lives of each country.

Read the full version of "Learning for All" at [www.worldbank.org/educationstrategy2020](http://www.worldbank.org/educationstrategy2020)

## EDUCATION AS A STRATEGIC DEVELOPMENT INVESTMENT

Compared with two decades ago, more young people are entering school, completing the primary level, and pursuing secondary education. Thanks to a combination of effective policies and sustained national investments in education, far fewer children in developing countries are out of school. Governments, civil society organizations (CSOs), communities, and private enterprises have built new schools and classrooms and recruited teachers at unprecedented levels.

**But too many young people are finishing school without the knowledge and skills required for productive employment in a 21<sup>st</sup>-century labor market.**

Education systems must do a better job preparing young people for the rapidly changing economy and technological landscape. Countries need more skilled

and agile workforces to increase their competitiveness and growth. Demographic shifts are creating "youth bulges" at the secondary and tertiary levels in middle-income countries. Rapid advances in information and communication technologies hold promise for making education more effective and inclusive.

**Gains in access have also turned attention to the challenge of improving the quality of education and accelerating learning. In addition, the global environment for education is changing.**

These changes call for a rethinking of the World Bank's education strategy over the next decade, setting out new priorities for investment, technical support, and policy assistance that focus on achieving Learning for All.

## THE IMPORTANCE OF LEARNING FOR ALL

While continuing the Bank's commitment to help countries reach the education Millennium Development Goals (MDGs), the new Education Strategy 2020 focuses on the goal of Learning for All. Learning for All means giving all people equitable opportunities to acquire the knowledge and skills they need to have healthy and satisfying lives, to be good citizens, and to be productive contributors to their countries' economic development.

The driver of development will ultimately be what young people learn. This applies to learning in and out of school, from preschool to the labor market across low-income countries, fragile states, and middle-income countries. The Strategy will support countries to ensure that more schooling evolves into more learning.

## Objective: Learning For All, Beyond Schooling

**The new strategy focuses on learning for a simple reason: growth, development, and poverty reduction depend on the knowledge and skills that people acquire, not the number of years that they sit in a classroom.** At the individual level, while a diploma may open doors to employment, it is a worker's skills that determine his or her productivity and ability to adapt to new technologies and opportunities. Knowledge and skills also contribute to an individual's ability to have a healthy and educated family and engage in civic life. At the societal level, recent research shows that the level of skills in a workforce - as measured by performance on international student assessments such as the Programme for International Student Assessment (PISA) and the Trends in International Mathematics and Science Study (TIMSS) - predicts economic growth rates far better than do average schooling levels. For example, an increase of one standard deviation in student reading and math scores (roughly equivalent to improving a country's performance ranking from the median to the top 15 percent) is associated with a very large increase of 2 percentage points in annual GDP per capita growth.

**Learning needs to be encouraged early and continuously, both within and outside of the formal schooling system.** The emerging science of brain development shows that to develop properly, a child's growing brain needs nurturing long before formal schooling starts at age 6 or 7. Investments in prenatal health and early childhood development programs that include education and health are essential to realize this potential. In the primary years, quality teaching is critical for giving students the foundational literacy and numeracy on which lifelong learning depends. Adolescence is another fertile pe-



riod for learning, but also a time when many students leave school to marry (especially in the case of girls) or to work full-time. Second-chance and nonformal learning opportunities are thus essential to ensure that all youth can acquire skills for the labor market.

The Learning for All strategy promotes the equity goals that underlie the education MDGs. In adopting the objective of learning for all, the new strategy elevates the education MDGs by linking them to the universally shared objective of accelerating learning. Major challenges of access remain for disadvantaged populations (especially girls and women) at the primary, secondary, and tertiary levels, with demand for the latter two levels of education having grown sharply as primary completion has increased. Without confronting these challenges, it will be impossible to achieve the objective of learning for all. Children and youth cannot develop the skills and values that they need without the foundational education provided by schools. Indeed, the latest (2009) PISA results reinforce the lesson that the countries that are most successful overall in promoting learning are those with the narrowest gaps in learning achievement among students.

**The bottom line of the Bank Group's education strategy is: Invest early. Invest smartly. Invest for all.**

**Invest early:** foundational skills acquired early in childhood make possible a lifetime of learning; hence the traditional view of education as starting in primary school takes up the challenge too late.

**Invest smartly:** getting value for the education dollar requires smart investments - that is, investments that have proven to contribute to learning. Quality needs to be the focus of education investments, with learning gains as a key metric of quality.

**Invest for all:** learning for all means ensuring that all students, not just the most privileged or gifted, acquire the knowledge and skills that they need. This goal will require lowering the barriers that keep girls, people with disabilities, and ethnolinguistic minorities from attaining as much education as other population groups.



Source: <http://www.flickr.com/photos/worldbank/>

## HOW TO ACHIEVE LEARNING FOR ALL

To achieve learning for all, the World Bank Group will channel its efforts in education in two strategic directions: **reforming education systems** at the country level and **building a high-quality knowledge base** for education reforms at the global level.

### System Reform, Beyond Inputs

**At the country level, the Bank Group will focus on supporting reforms of education systems.**

The term "education system" typically refers to the public schools, universities, and training programs that provide education services. In this strategy, "education system" includes the full range of learning opportunities available in a country, whether they are provided or financed by the public or private sector (including religious, nonprofit, and for-profit organizations). It includes formal and nonformal programs, plus the full range of beneficiaries of and stakeholders in these programs - teachers, trainers, administrators, employees, students and their families, and employers. It also includes the rules, policies, and accountability mechanisms that bind an

education system together, as well as the resources and financing mechanisms that sustain it. This more inclusive concept of the education system allows the Bank Group and its partner countries to seize opportunities and address barriers that lie outside the bounds of the system as it is traditionally defined.

**Improving education systems means moving beyond simply providing inputs.** There is no question that providing adequate levels of schooling inputs - whether these are school buildings, trained teachers, or textbooks - is crucial to a nation's educational progress. Indeed, the increase in inputs in recent years has made it possible to enroll millions more children in school; this effort must continue wherever levels of inputs remain inadequate. But improving systems also requires ensuring that inputs are used more effectively to accelerate learning. While past strategies have recognized this goal, the new strategy gives it more emphasis, setting it in a context of education system assessment and reform.

**The education system approach of the new strategy focuses on increasing accountability and results as a complement to providing inputs.** Strengthening education systems means aligning their governance, management of schools



Source: <http://www.flickr.com/photos/worldbank/>





Source: <http://www.flickr.com/photos/worldbank/>

and teachers, financing rules, and incentive mechanisms with the goal of learning for all. This entails reforming relationships of accountability among the various actors and participants in an education system so that these relationships are clear, consistent with functions, measured, monitored, and supported. It also means establishing a clear feedback cycle between financing (including international aid) and results. Because failures of governance and accountability typically have their severest effects on schools serving disadvantaged groups, this system approach promotes educational equity as well as efficiency.

**Operationally, the Bank will increasingly focus its financial and technical aid on system reforms that promote learning outcomes.** To achieve this, the Bank will focus on helping partner countries build the national capacity to govern and manage education systems, implement quality and equity standards, measure system performance against national education goals, and support evidence-based policy making and innovations. While this agenda sounds challenging, the system approach does not require reforming all policy domains at once. Detailed system analysis and investment in knowledge and data will allow the Bank and policymakers to “analyze globally and act locally” - that is, to assess the quality and effectiveness of multiple policy domains, but focus action on the areas where improvements can have the highest payoff in terms of schooling and learning outcomes. Internally, the Bank Group will work to improve project outcomes by strengthening the results framework for projects, improving portfolio monitoring, and selecting the right operational instruments.

### Building the Knowledge Base

**At the regional and global level, the Bank will help develop a high-quality knowledge base on education reform.** Analytical work, practical evidence, and know-how related to education programs and policies are critical to improving the performance of education systems around the world. By investing in system assessments, impact evaluations, and assessments of learning and skills, the Bank will help its partner countries answer the key questions that shape educational reform: Where are the strengths of our system? Where are the weaknesses? What interventions have proven most effective in addressing them? Are learning opportunities reaching the most disadvantaged groups? What are the key roles of public and private sector in service delivery? Are children and youth acquiring the knowledge and skills that they need?

**The Bank is developing new knowledge approaches to help guide education reform.** New tools for system assessment and benchmarking (“system tools”) will provide detailed analysis of country capacities in a wide array of education policy domains, from early childhood development (ECD), student assessment, and teacher policy to equity and inclusion, tertiary education, and skills development, among others. In each policy domain, the system tools will analyze the “missing middle” of intermediate outcomes, illuminating the part of the results chain that lies between inputs and learning outcomes. This vital information will allow policymakers and civil society organizations to make better-informed decisions about education reforms and interventions by determining where the results chain is breaking down. And by benchmarking progress against international best practices, the tool will highlight areas of strength and weakness as well as identify successful reformers whose experience can inform education policy and practices in other countries.

**Better knowledge of the strengths and weaknesses of particular education systems will enable the Bank Group to respond more effectively to the needs of its partner countries.**

Countries at different levels of educational development face different challenges, and priorities for assistance and knowledge sharing should vary accordingly. The new strategy therefore supplements the Bank Group’s usual regional groupings with developmental groupings based on whether a country is middle-income, low-income, or fragile, and sets out distinct priorities for each of these groups. For example, in middle-income countries, where a higher proportion of available jobs is likely to require higher-level skills, one priority is to improve quality assurance and financing for tertiary education and for workforce development. In many low-income countries and fragile states, striving to reach the MDGs remains a key priority.

**Careful analysis of each country’s level of educational development, in addition to its overall development, allows for sharper and more operationally useful differentiation.** Some countries achieve much higher levels of educational performance, in terms of system operation as well as outcomes, than would be expected based on their incomes. Detailed and internationally comparable information about education systems helps identify these strong performers in specific areas - such as teacher professional development, student assessment, or university accreditation - while also flagging weaknesses in other areas. In addition to helping the Bank Group prioritize its assistance, this system information will facilitate more effective South-South learning, by enabling countries facing specific educational challenges to learn from the stronger performers.

Source: “Learning for All”, [www.worldbank.org/educationstrategy2020](http://www.worldbank.org/educationstrategy2020)



# FRAMEWORK FOR 21<sup>ST</sup> CENTURY LEARNING

## P21'S VISION FOR STUDENT SUCCESS IN THE NEW GLOBAL ECONOMY

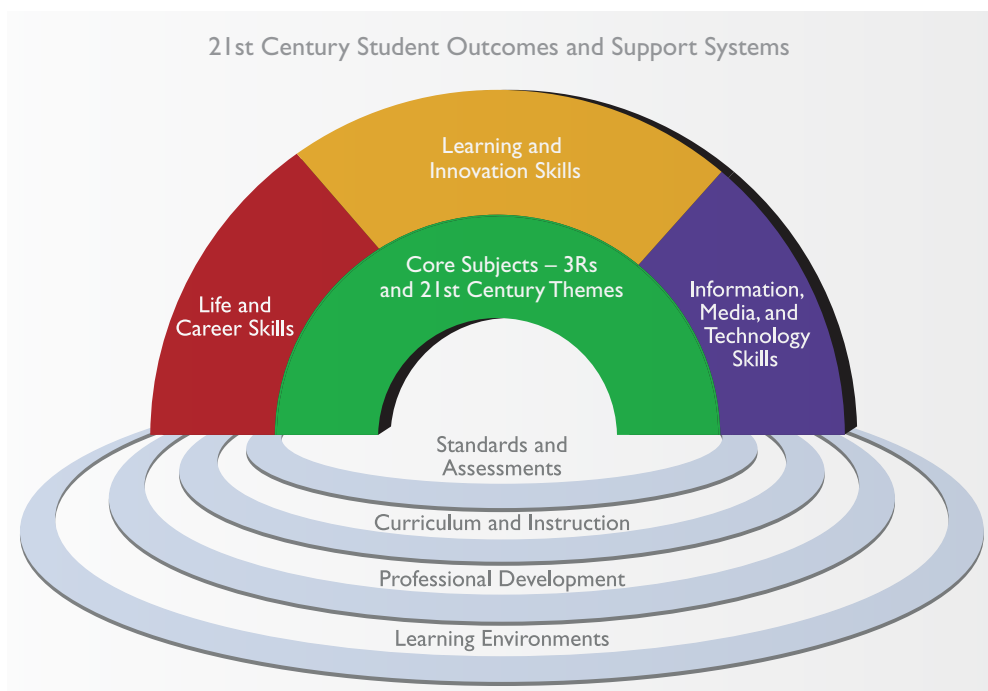
The Partnership for 21<sup>st</sup> Century Skills is an international organization that advocates for 21<sup>st</sup> century readiness for every student.

As education follows the path of innovation towards the future, we can notice the shift from a unique traditional model to a holistic and multidirectional approach. And just like P21, JP-inspiring knowledge is concerned about what students really need to learn for succeeding in the 21<sup>st</sup> century.

Read the full version of "P21 Framework Definitions" at [www.P21.org](http://www.P21.org)

## 21<sup>ST</sup> CENTURY STUDENT OUTCOMES

To help practitioners integrate skills into the teaching of core academic subjects, the Partnership has developed a unified, collective vision for learning

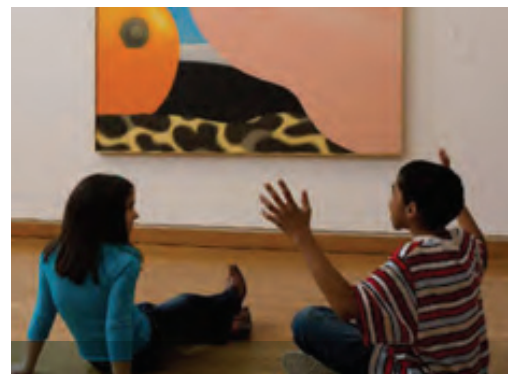
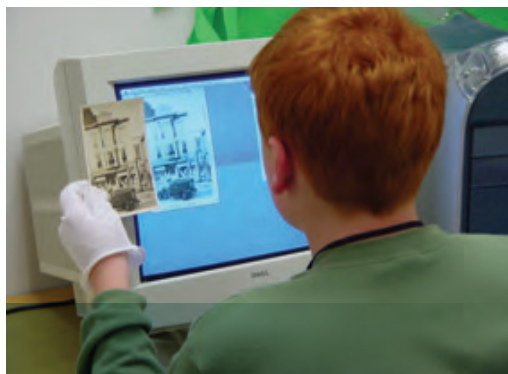


known as the Framework for 21<sup>st</sup> Century Learning. This Framework describes the skills, knowledge and expertise students must master to succeed in work and life; it is a blend of content knowledge, specific skills, expertise and literacies.

Every 21<sup>st</sup> century skills implementation requires the development of core academic subject knowledge and understanding among all students. Those who can think critically and communicate effectively must build on a base of core academic subject knowledge.

Within the context of core knowledge instruction, students must also learn the essential skills for success in today's world, such as critical thinking, problem solving, communication and collaboration.

When a school or district builds on this foundation, combining the entire Framework with the necessary support systems - standards, assessments, curriculum and instruction, professional development and learning environments - students are more engaged in the learning process and graduate better prepared to thrive in today's global economy.



Source: <http://www.ims.gov/pdf/21stCenturySkills.pdf>

## ◎ CORE SUBJECTS AND 21<sup>ST</sup> CENTURY THEMES

Mastery of core subjects and 21<sup>st</sup> century themes is essential for all students in the 21<sup>st</sup> century. Core subjects include:

- English, reading or language arts
- World languages
- Arts
- Mathematics
- Economics
- Science
- Geography
- History
- Government and Civics

In addition to these subjects, we believe schools must move to include not only a focus on mastery of core subjects, but also promote understanding of academic content at much higher levels by weaving 21<sup>st</sup> century interdisciplinary themes into core subjects:

- Global Awareness
- Financial, Economic, Business and Entrepreneurial Literacy
- Civic Literacy
- Health Literacy
- Environmental Literacy





## ◉ LEARNING AND INNOVATION SKILLS

Learning and innovation skills increasingly are being recognized as those that separate students who are prepared for a more and more complex life and work environments in the 21<sup>st</sup> century, and those who are not. A focus on creativity, critical thinking, communication and collaboration is essential to prepare students for the future.



### 1. Creativity and Innovation

#### Think Creatively

- Use a wide range of idea creation techniques (such as brainstorming)
- Create new and worthwhile ideas (both incremental and radical concepts)
- Elaborate, refine, analyze and evaluate their own ideas in order to improve and maximize creative efforts

#### Work Creatively with Others

- Develop, implement and communicate new ideas to others effectively
- Be open and responsive to new and diverse perspectives; incorporate group input and feedback into the work
- Demonstrate originality and inventiveness in work and understand the real world limits to adopting new ideas
- View failure as an opportunity to learn; understand that creativity and innovation is a long-term, cyclical process of small successes and frequent mistakes

#### Implement Innovations

- Act on creative ideas to make a tangible and useful contribution to the field in which the innovation will occur

### 2. Critical Thinking and Problem Solving

#### Reason Effectively

- Use various types of reasoning (inductive, deductive, etc.) as appropriate to the situation

#### Use Systems Thinking

- Analyze how parts of a whole interact with each other to produce overall outcomes in complex systems

#### Make Judgments and Decisions

- Effectively analyze and evaluate evidence, arguments, claims and beliefs
- Analyze and evaluate major alternative points of view
- Synthesize and make connections between information and arguments
- Interpret information and draw conclusions based on the best analysis
- Reflect critically on learning experiences and processes

#### Solve Problems

- Solve different kinds of non-familiar problems in both conventional and innovative ways
- Identify and ask significant questions that clarify various points of view and lead to better solutions

### 3. Communication and Collaboration

#### Communicate Clearly

- Articulate thoughts and ideas effectively using oral, written and nonverbal communication skills in a variety of forms and contexts
- Listen effectively to decipher meaning, including knowledge, values, attitudes and intentions
- Use communication for a range of purposes (e.g. to inform, instruct, motivate and persuade)
- Use multiple media and technologies, and know how to judge their effectiveness a priori as well as assess their impact
- Communicate effectively in diverse environments (including multi-lingual)

#### Collaborate with Others

- Demonstrate ability to work effectively and respectfully with diverse teams
- Exercise flexibility and willingness to be helpful in making necessary compromises to accomplish a common goal
- Assume shared responsibility for collaborative work, and value the individual contributions made by each team member

## ◉ INFORMATION, MEDIA AND TECHNOLOGY SKILLS

People in the 21<sup>st</sup> century live in a technology and media-suffused environment, marked by various characteristics, including: 1) access to an abundance of information, 2) rapid changes in technology tools, and 3) the ability to collaborate and make individual contributions on an unprecedented scale. To be effective in the 21<sup>st</sup> century, citizens and workers must be able to exhibit a range of functional and critical thinking skills related to information, media and technology.

### 1. Information Literacy

#### Access and Evaluate Information

- Access information efficiently (time) and effectively (sources)
- Evaluate information critically and competently

#### Use and Manage Information

- Use information accurately and creatively for the issue or problem at hand
- Manage the flow of information from a wide variety of sources
- Apply a fundamental understanding of the ethical/legal issues surrounding the access and use of information

### 2. Media Literacy

#### Analyze Media

- Understand both how and why media messages are constructed, and for what purposes
- Examine how individuals interpret messages differently, how values and points of view are included or excluded, and how media can influence beliefs and behaviours
- Apply a fundamental understanding of the ethical/legal issues surrounding the access and use of media

#### Create Media Products

- Understand and utilize the most appropriate media creation tools, characteristics and conventions
- Understand and effectively utilize the most appropriate expressions and interpretations in diverse, multi-cultural environments

### 3. ICT (Information, Communications and Technology) Literacy

#### Apply Technology Effectively

- Use technology as a tool to research, organize, evaluate and communicate information
- Use digital technologies (computers, PDAs, media players, GPS, etc.), communication/networking tools and social networks appropriately to access, manage, integrate, evaluate and create information to successfully function in a knowledge economy
- Apply a fundamental understanding of the ethical/legal issues surrounding the access and use of information technologies





## ◎ LIFE AND CAREER SKILLS

Today's life and work environments require far more than thinking skills and content knowledge. The ability to navigate the complex life and work environments in the globally competitive information age requires students to pay rigorous attention to developing adequate life and career skills.

### 1. Flexibility and Adaptability

#### Adapt to Change

- Adapt to varied roles, jobs responsibilities, schedules and contexts
- Work effectively in a climate of ambiguity and changing priorities

#### Be Flexible

- Incorporate feedback effectively
- Deal positively with praise, setbacks and criticism
- Understand, negotiate and balance diverse views and beliefs to reach workable solutions, particularly in multi-cultural environments

### 2. Initiative and Self-Direction

#### Manage Goals and Time

- Set goals with tangible and intangible success criteria
- Balance tactical (short-term) and strategic (long-term) goals
- Utilize time and manage workload efficiently
- Work Independently
- Monitor, define, prioritize and complete tasks without direct oversight

#### Be Self-directed Learners

- Go beyond basic mastery of skills and/or curriculum to explore and expand one's own learning and opportunities to gain expertise
- Demonstrate initiative to advance skill levels towards a professional level
- Demonstrate commitment to learning as a lifelong process
- Reflect critically on past experiences in order to inform future progress

### 3. Social and Cross-Cultural Skills

#### Interact Effectively with Others

- Know when it is appropriate to listen and when to speak
- Conduct themselves in a respectable, professional manner

#### Work Effectively in Diverse Teams

- Respect cultural differences and work effectively with people from a range of social and cultural backgrounds
- Respond open-mindedly to different ideas and values
- Leverage social and cultural differences to create new ideas and increase both innovation and quality of work

### 4. Productivity and Accountability

#### Manage Projects

- Set and meet goals, even in the face of obstacles and competing pressures
- Prioritize, plan and manage work to achieve the intended result

#### Produce Results

- Demonstrate additional attributes associated with producing high quality products including the abilities to:
  - Work positively and ethically
  - Manage time and projects effectively
  - Multi-task
  - Participate actively, as well as be reliable and punctual
  - Present oneself professionally and with proper etiquette
  - Collaborate and cooperate effectively with teams
  - Respect and appreciate team diversity
  - Be accountable for results

### 5. Leadership and Responsibility

#### Guide and Lead Others

- Use interpersonal and problem-solving skills to influence and guide others toward a goal
- Leverage strengths of others to accomplish a common goal
- Inspire others to reach their very best via example and selflessness
- Demonstrate integrity and ethical behaviour in using influence and power

#### Be Responsible to Others

- Act responsibly with the interests of the larger community in mind

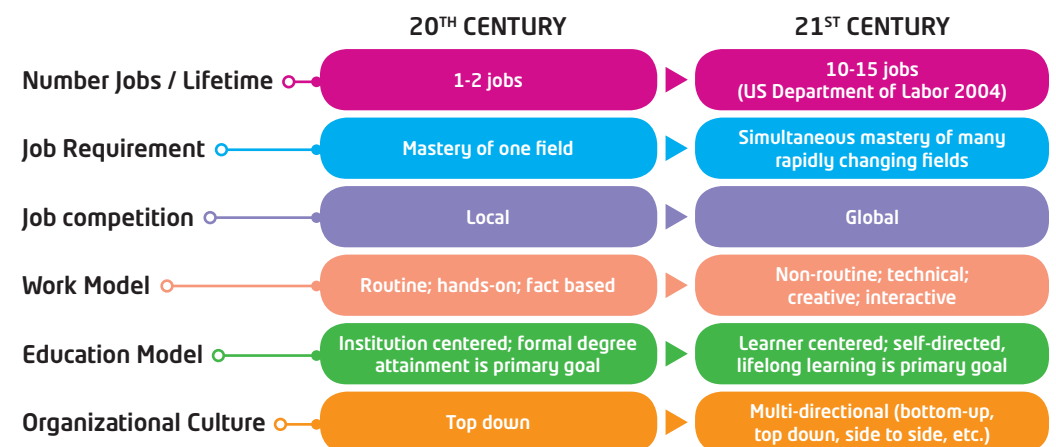


## ◎ 21<sup>ST</sup> CENTURY SUPPORT SYSTEMS\*

Developing a comprehensive framework for 21<sup>st</sup> century learning requires more than identifying specific skills, content knowledge, expertise and literacies. An innovative support system must be created to help students master the multidimensional abilities that will be required of them. The Partnership has identified five critical support systems to ensure student mastery of 21<sup>st</sup> century skills:

- 21<sup>st</sup> Century Standards
- Assessments of 21<sup>st</sup> Century Skills
- 21<sup>st</sup> Century Curriculum and Instruction
- 21<sup>st</sup> Century Professional Development
- 21<sup>st</sup> Century Learning Environments

\*More about 21<sup>st</sup> Century Support Systems in the next issue of The mg Times



\*Source: "Museums, libraries, and 21st Century Skills" at <http://www.ims.gov/assets/1/AssetManager/21stCenturySkills.pdf>

In the light of the accelerating economic, social and educational changes of the 21<sup>st</sup> century, it is clear that the needs and nature of the workforce have dramatically changed.

In this scenario, talking about a new framework of learning and a redefinition of society's needs makes perfectly good sense. And all educators, school administrators, pedagogic content producers, technology and education institutions must be aware of the demands future that is already here.

Source: "P21 Framework Definitions", [www.P21.org](http://www.P21.org)



# TEACHING IN TIMES OF CHANGE



RUI LIMA, A PRIMARY SCHOOL TEACHER AWARDED BY MICROSOFT PARTNERS IN LEARNING, IS A TRUE EXAMPLE OF INNOVATION AND CREATIVITY IN TEACHING. HE HAS A PASSION FOR THE INTERNET AND NEW TECHNOLOGIES, THUS USING THESE AS HIS MAIN TOOLS WITHIN THE CLASSROOM. AT A TIME WHEN CHANGING OF TEACHING MODELS IS AN EVERYDAY OCCURRENCE, RUI LIMA SPEAKS OF THE TEACHER'S INNOVATIVE ROLE IN A CHALLENGING TWENTY-FIRST CENTURY.

## **What is the experience of teaching in times of change?**

Teaching in times of change is an ongoing challenge. Today, the teacher's role is dramatically changing. They stopped being the holders of all the knowledge within the classroom, and went to having a role as the promoter of discovery. Today, the teacher is endowed with the task of providing children with the necessary skills that will allow them to explore, discover, and learn through research, experimentation, and logical reasoning, using the almost unlimited tools that this world of information offers us. Nowadays, the teacher should not fight the use of technology in the classroom because it is a part of the children's world. They must instead use this as a way to come close to students and boost their capabilities.

## **In your everyday lessons, where do you find the transition from a traditional classroom model to an innovative model of the future? Is there a real paradigm shift in Education?**

In my classroom the traditional model has been gradually replaced by a project dynamic, where students use new technologies to develop skills, access contents and information, as well as explore their skills in various domains. The use of new technologies has become something natural and recurring in my classroom, but I don't think that innovation is simply in the use of these instruments. Innovation is to challenge students to think, explore and discover their talents, and use the tools they have at their disposal to develop skills that will enable them to adapt to a world of constant change. With this world being ever more technological, it makes no sense to push technology away from the classroom!

## **How can we define learning technologies?**

Learning technologies are much more than having a computer for each student in the classroom, or an interactive whiteboard that teachers and students can use in their day-to-day. There is no doubt that the existence of these technologies in a classroom enhances the capabilities of each of the participants in the educational process, however, this technology must be accompanied by innovation from a teaching perspective. We should invest in creating partnerships with other schools and organisations, both na-





tional and international, promote the use and sharing of digital teaching resources and 2.0. web tools with other participants in the educational process, thus giving value to teamwork and to project dynamics. I believe more and more that this work methodology focused on project dynamics can meet the demands of the world we live in, and more so, the world in which we will be living in, in years to come.

### **What is the teacher's role in the implementation of new technologies in the classroom?**

In the scope of where we are today, the teacher should be the driving force in using new technologies in the classroom. He or she should promote the use of equipment and tools, guiding students in their gaining of skills in the various fields and monitoring students in their work, insofar as there are certain dangers in using such technologies within the classroom. The teacher doesn't need to understand all of the existing tools, also because that would be impossible, but he or she should be prepared to make available new tools to motivate students and that are beneficial to their development, whilst he or she must also be prepared to learn together with the students. To me, this seems to be a crucial aspect in the paradigm shift: the teachers should continue to explore their teaching skills, but when doing so leave their comfort zone that is usually expressed by the need to keep everything under control, and they should give students more freedom, showing that they too are ready to learn with them.

### **What is an innovative teacher?**

An innovative teacher is one who seeks knowledge, and share knowledge, with constant improvement; one who sees collaboration as a step forward towards excellence and who looks at change as an opportunity to learn and broaden horizons.

When, at the start of 2011, I was chosen by Microsoft to represent Portugal in the European Innovative Teachers Competition in Moscow, I was aware that the project was innovative, to the extent that it was based on the collaboration between schools, teachers, and students. The Eco-Partnerships project, honoured at a European level, but also on a worldwide basis, joined together all of the aspects which I have mentioned earlier: the use of technology, including mgseries computers, teamwork among students, cooperation between schools from different countries and multidisciplinary learning centred on the concern for the surrounding environment. Being an innovative teacher is to promote that collaboration, "knocking down" the classroom walls and school boundaries, thus making the learning space more global.

### **Are educational systems prepared for this implementation?**

Michael Fullan, a recognised educational leader and consultant, often speaks of the teacher as an Agent of Change, and that is an idea which I can often identify myself with. We cannot wait around for policymakers to make the change that is needed in Education, because I don't think the needed changes undergo the need for decrees or orders. I believe that teachers, through innovative practises, can achieve exceptional results (and I don't mean exams), and by sharing within the teaching community, can make

School a place more suited to the demands of the modern world. The question to be asked is rather: Are teachers prepared for this paradigm shift?

### **Do teachers and school administrators have enough autonomy from educational systems to allow them to innovate in their schools?**

In my particular case, yes. The Monte Flor School is a paradigmatic example of innovation in education. We are involved in a number of national and international programs and have always managed to join the projects that we develop with the programme curricula. A cohesive team, as well as a good environment and the existing organisational openness, promote a school culture focused on innovation. However, it is important to stress that in addition to cooperating with Microsoft, I have also cooperated with the DG-IDC Team Resources and Educational Technologies on some projects and initiatives, having met many innovative teachers with extraordinary ideas. Some manage to obtain the support of the entire school community, whereas others need to move mountains in order to develop their projects. Resistance to change can be large scale and have different origins: colleagues who don't see with kind eyes the dynamic teacher who gives 200% of himself; directors who don't understand the practical result of these initiatives; parents or guardians who fail to see how these projects can prepare their children for exams... As mentioned, it is the task of innovative teachers to convince the other players in the educational process that innovation is worth betting on!

### **How important is technology in stimulating the creativity and talent of students?**

When some years ago I became interested in the Theory of Multiple Intelligences, I understood how important it is to stimulate students in various areas. At the time, I began to develop several projects related to arts and discovering children's talents in the different areas. The very way in which I began to work with students drastically changed. When we began using mgseries computers, I found that students started exploring their various areas of interest, where their greater talents would often be revealed. Today, the diversity of tools and applications that students have at their disposal in the areas of art, mathematical logic, writing, imagery are the "fuel to success" for the blooming of talents and creativity.

### **Which twenty-first century skills will be the first to be developed by students of today?**

As mentioned above, I believe that the so called twenty-first century skills involve the ability to work as a Team, to work in a multicultural context, the ability to adapt to sudden change and to changing variables, the resolution of complex issues through multitasking and, of course, through Creativity. All these skills which I have mentioned are in direct relation to the vertiginous evolution that we have been seeing in our society, where everyone is but a click away, in a world of constant change and in which there is a need to always be on the lookout for new products, new ideas and new ways of surprising. This world lacks creativity and it is up to us to prepare our children and our young ones for this future.

### **You often mention the need for a school without limits. How would you define this global learning environment?**

The classroom cannot be a closed space where students and teacher cohabit, isolated from the rest of the world, with their books and writing pads that constrict the very function of the teacher as a promoter of learning. The classroom walls should be "knocked down", teachers should cooperate with their next door colleagues, the learning process should "jump" the school boundaries and create a partnership with local entities, non-governmental organisations, other schools and other agents that can turn the process of teaching and learning, richer and more meaningful. I believe that, in a near future, this will be a reality, more so because we feel that students have understood the full potential that the digital world has to offer them.

### **What is the importance of creating a global network of collaboration amongst students, teachers, schools, researchers and educational leaders?**

In recent times we have seen the appearance of various programmes aimed at creating such networks. Moreover, my School has been involved in some of them and this has been very important to the implementation of projects. Programmes such as Etwinning, Eco-Escolas, the Shout, or platforms such as Partners in Learning Network, were created so that teachers, students, researchers, educational leaders and even other entities may collaborate in order to promote the continuous sharing of resources, ideas and experiences that enrich not only the learning process, but also all of those participating.

(Rui Lima is a Primary School Teacher and winner of Microsoft Partners in Learning Innovative Educators' Competition 2011)





**Pmate**  
projecto matemática ensino

SCIENCE COMPETITION  
JOINS MG SERIES AND  
13.000 STUDENTS





For three days, the University of Aveiro received 13.000 Portuguese students to participate in the National Science Competitions, already on its 23<sup>rd</sup> edition.

From Math to Biology, Geology or Physics, students answered to thousands of questions using a game-based learning platform supported by 230 mgseries netbooks.

COMP@science is a cutting-edge project, with online software that combines the best of new technologies with contents adapted to school curriculum. mgseries became the ideal interface for the teams to compete and, above all, have fun while learning subjects that, usually, are not the easiest to master.



# ADAPTIVE CURRICULUM AND JP-INSPIRING KNOWLEDGE: "A TRUE ALLIANCE FOR ALL THE RIGHT REASONS"



JIM BOWLER IS CEO OF ADAPTIVE CURRICULUM AND A BELIEVER THAT EVERY STUDENT HAS THE ABILITY TO BE INNOVATIVE. AND AS A FORMER TEACHER AND ADMINISTRATOR, HE'S ABLE TO DRIVE HIS BELIEFS AND BUSINESS BY PUTTING HIMSELF IN THE SEAT OF HIS CUSTOMERS. THE MG TIMES SPOKE TO BOWLER ABOUT THE AWARD-WINNING ADAPTIVE CURRICULUM, INNOVATION IN EDUCATION, AND HIS THOUGHTS ON A NEW ALLIANCE BETWEEN ADAPTIVE CURRICULUM AND JP-INSPIRING KNOWLEDGE.

## **Tell us a little about Adaptive Curriculum (AC).**

Adaptive Curriculum offers a new way of learning Math and Science. It's a way that truly puts the student at the center of the learning experience. We focus on middle and high school students with online products that empower mastery of key concepts. We use dynamic graphics and interactive simulations that engage students in the digital realm they're now used to - and they love it.

Teachers can assign lessons and Activity Objects, and students actually enjoy their instruction while developing the critical-thinking skills necessary to operate in a fast-moving world. Math and Science, while not engaging for many students, can now be engaging for all students.

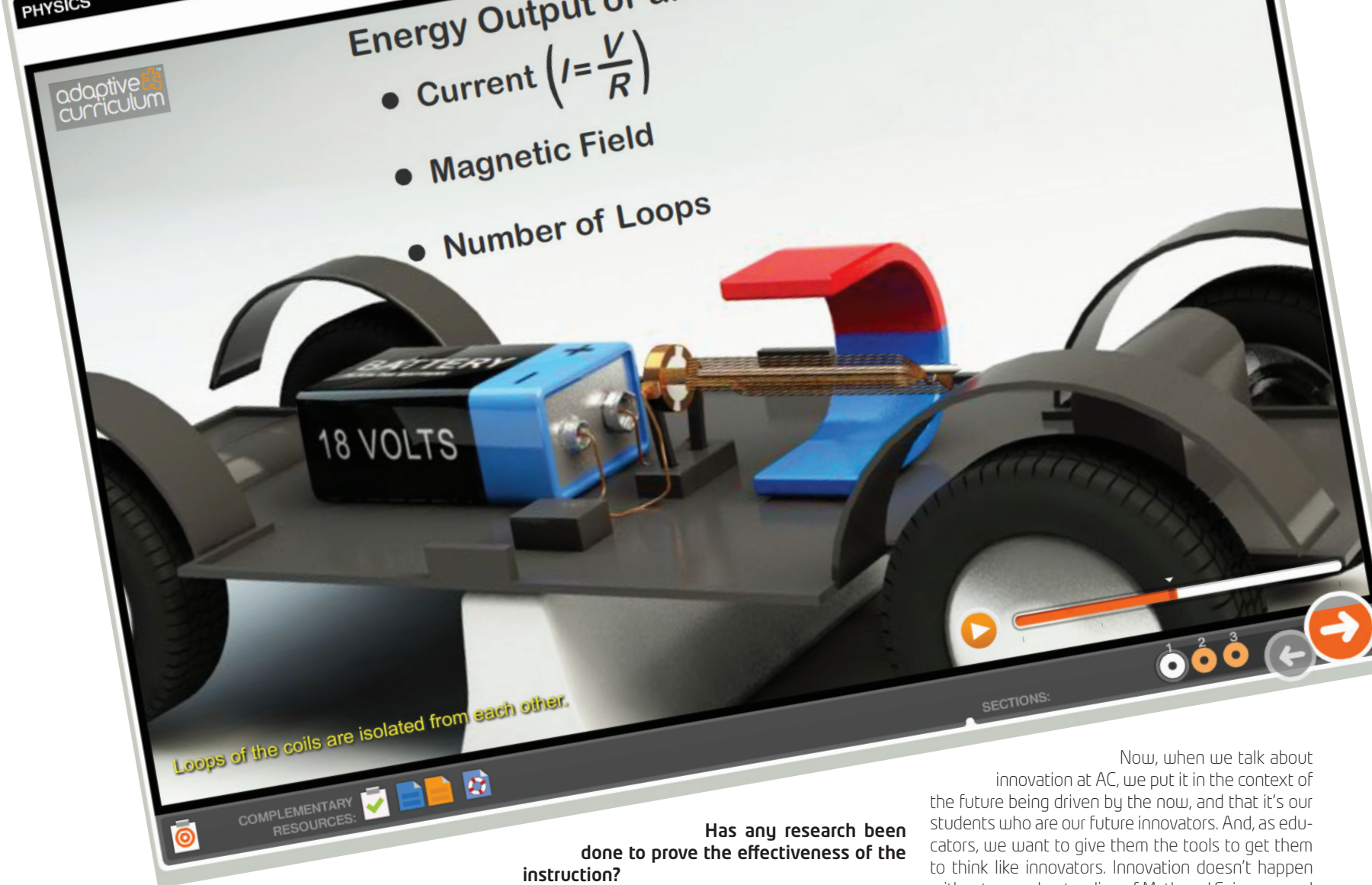
Our brands focus on three markets. AC Math and AC Science, available in English and Spanish, serve the U.S. school market; Vitamina, also available in Spanish and English, is our Latin American brand for middle and high schools. Also, we are about to launch a consumer brand for students who need additional help at home. All of these are built on the same pedagogy and technology.

## **What is the pedagogic foundation behind the instruction?**

We base our pedagogy on the 5E Instructional Model: Engage, Explore, Explain, Elaborate, and Evaluate. Our Activity Objects, Animations, and 3D Models initiate learning by sparking student interest and providing real-world experiences that allow them to use prior knowledge to make hypotheses and foster critical thinking. We provide the clarity around a concept, process, skill, or behavior that gets students thinking deeply, and we then assess and provide feedback that allows them to achieve proficiency.







Loops of the coils are isolated from each other.

COMPLEMENTARY RESOURCES:

### Has any research been done to prove the effectiveness of the instruction?

Yes. We are right in the middle of a two-year study with researchers and our partners at Arizona State University's (ASU) Technology Based Learning & Research Center; it compares middle school students taught using AC with a control group using traditional instruction.

The results so far are great: 95 percent of teachers using AC had students achieving more than a 5 percent gain on post-test assessments over students not using AC. Additionally, teachers using AC had more students with the highest scores (3 and 4) on the state assessment, and fewer students failing the assessment. Similar success was seen using the national assessments, with most classes posting a 5 percent or more post-test gain over the control group.

We're also not shy about asking customers to give us their opinions. We have case studies and teacher testimonials on how students are more motivated in their classes, and we have feedback from administrators who share how teachers have become reenergized when using AC.

### Speaking of innovation, how is it revolutionizing learning environments?

Well, as most of us know, the classroom is changing. Textbooks are going away - maybe in 5 years, 10 years, or 2 - who knows exactly how long? But the change has already started. The classroom is going digital. Students will be active learners with teachers serving as advisors, experts, and coaches. Because of technology, teaching and learning will be much more meaningful.

Now, when we talk about innovation at AC, we put it in the context of the future being driven by the now, and that it's our students who are our future innovators. And, as educators, we want to give them the tools to get them to think like innovators. Innovation doesn't happen without an understanding of Math and Science - and that's where we come in.

### AC and JP-inspiring knowledge (JP-IK) have just started a new collaboration. What is the relevance of his partnership for Education?

This is very exciting for us, and is a true alliance for all the right reasons. With JP-IK's global reach and leadership position in ICT-based education, as a means of delivering our learning solution, we couldn't ask for a better match to reach new markets.

Furthermore, JP-IK's mission to "... foster human development" is right there with AC's goal to "... plant the seeds of innovation" in the minds of our students. It's important for us to align with brands who have a mission that's much greater and more meaningful than simply delivering technology or growing a business.

### What is your goal in working with JP-inspiring knowledge?

If we can have thousands - or millions - of students benefitting from JP-IK's classroom technology and AC's Math and Science solution across many countries, we will be graduating tomorrow's scientists, mathematicians, and leaders.







# JP-IK DELIVERS RECOGNIZED EXPERTISE IN 1:1 ELEARNING SOLUTIONS

Intel® Learning Series  
Advancing Education Worldwide  
Education Solution Provider

## JP-IK AS INTEL® LEARNING SERIES EDUCATION SOLUTION PROVIDER

As an approved Education Solution Provider (ESP), JP-inspiring knowledge has been recognized expertise in Total 1:1 eLearning Solutions, bringing together comprehensive, effective answers based on local requirements and worldwide ILS best practices.

### A credible player in the Education Market

Successful technology projects stimulate economies as well as young minds. JP-inspiring knowledge is uniquely qualified to understand each education vision and to successfully deliver a full and sustainable solution that includes products, services, and support. And delivering comprehensive solutions is an important key to implementing 1:1 eLearning in schools.

### A Complete Solution for All

A recognized ESP has the expertise to anticipate and solve challenges while bringing together all the necessary components and core stakeholders. As an Intel-approved Education Solution Provider (ESP), JP-inspiring knowledge has the expertise to anticipate and solve challenges while bringing together all the necessary components:

#### • Decision Makers need successful implementations.

JP-inspiring knowledge provides consulting and guidance that draws from its experience in delivering successful education technology projects all over the world.

#### • Implementers need service expertise

JP-inspiring knowledge provides technical and teacher training, and addresses the challenges related to security, storage, and anti-theft measures.

#### • Educators need advanced software solutions

JP-inspiring knowledge has the competence and network to deliver the full range of components to support pedagogical needs such as project-based learning, classroom collaboration, assessment tools, and other relevant software through a network of ILS ecosystem partners.

#### • Students need the right technology.

The mgseries netbook, powered by Intel Classmate PC, is a rugged mobile reference design created specifically for the educational needs of students in grades K-12. Solutions include easy connectivity, educational software, and content.

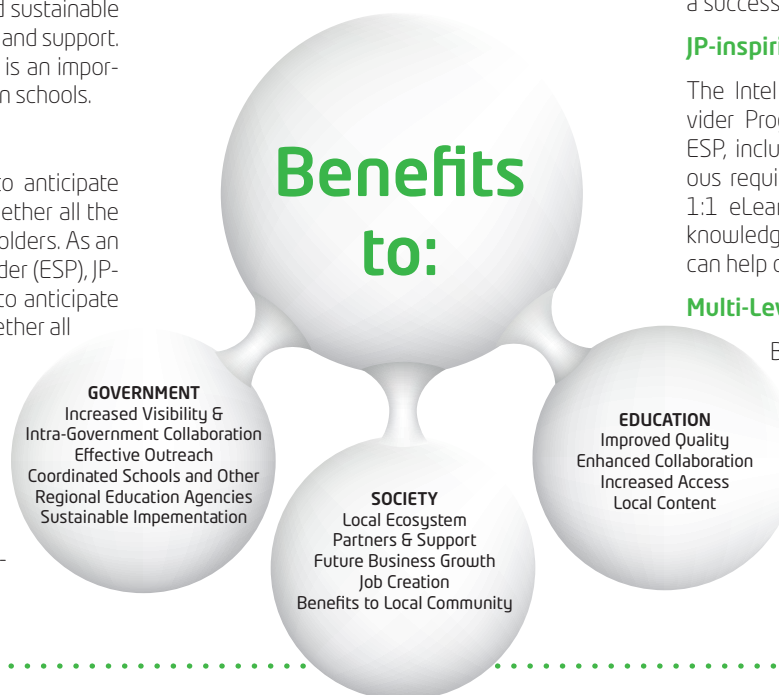
By coordinating these elements, JP-inspiring knowledge provides customers with a single source to address the requirements for 1:1 eLearning. Intel provides training and shares tools with all approved ESPs, helping ensure that JP-inspiring knowledge can help you with the complex process of implementing a successful 1:1 eLearning solution.

### JP-inspiring knowledge Delivers Results

The Intel Learning Series Education Solution Provider Program is dedicated to ensuring that each ESP, including JP-inspiring knowledge, meets rigorous requirements to plan and implement complete 1:1 eLearning solutions. Working with JP-inspiring knowledge to deliver your 1:1 eLearning solution can help create immediate and longer-term benefits.

### Multi-Level Return on Investment

Being an Intel Learning Series ESP signifies that JP-inspiring knowledge is part of an elite group of companies that have undergone a thorough process of validation. ESPs are uniquely qualified to understand your education vision and to successfully deliver a full and sustainable eLearning solution that includes products, services, and support.





# TOTAL COST OF OWNERSHIP (TCO)

## THE INTEL® LEARNING SERIES AND JP-INSPIRING KNOWLEDGE ADVANTAGE

**Research findings confirm that comprehensive 1:1 eLearning solutions from Intel® Learning Series (Intel® LS) and JP-inspiring knowledge (JP-IK) deliver industry-leading total cost of ownership (TCO).**

Every aspect of the 1:1 eLearning solution is addressed by the purpose-built for education Intel® Learning Series (Intel® LS), from planning, through implementation, to ongoing support from Intel LS-qualified Education Service Providers, like JP-inspiring knowledge (JP-IK). The cost of this total solution is lower than if customers purchased individual components, goods, and services to build a complete education solution themselves; in fact, the cost of the Intel LS/JP-IK total solution over five years is less than the initial purchase price of devices alone in some other solutions.

The Intel LS/JP-IK total solution helps facilitate predictable budgeting cycles for governments and a manageable project framework over the long term. At the same time, customers can reduce costs by choosing and customizing the hardware and software features most appropriate to their needs.

This proven approach optimizes initial and ongoing costs while also protecting investments:

- **Predictable and reliable access to infrastructure** to deliver an effective learning experience, such as dual-boot platform management and one-button system recovery
- **Scalable and sustainable professional-development program** for teachers and administrators
- **Well-established processes and tools** for deployment, maintenance, management, evaluation, and sustaining the project

- **Pre-validated combinations of hardware, software, and services**, optimized to work together
- **Intel® Learning Series Alliance**, a worldwide network of trusted Education Solution Providers
- **Local sourcing of technology and educational content** that helps build local economies

### Building a Complete Picture of TCO

While the initial cost of computer equipment is often the focus of attention when people consider the TCO associated with 1:1 eLearning solutions where each student has their own mobile device at school, a complete analysis must include many other components. The well-regarded GESCI framework, which grew out of the work of the United Nations ICT Task Force, specifies that TCO includes initial and recurring costs at both the central-government and local-school levels.

Intel commissioned Education Impact, a global education and technology consultancy, to assess the TCO of the Intel LS/JP-IK deployment of an assumed figure of 811,000 mgseries PCs in Portugal - known as the "Magellan Project" - using the GESCI framework. That study found that Magellan's TCO was better overall than competing solutions worldwide.<sup>1</sup>

Marketing messages for many competing 1:1 eLearning solutions omit costs other than those of purchasing student computers, which can vastly under-represent the TCO of those solutions. Since Intel LS/JP-IK TCO research comprehends the full impacts of other initial and ongoing costs, customers are better able to plan and sustain the solution.

Research Findings: Intel Learning Series Delivers Industry-Leading TCO.

The Education Impact study of the Magellan Project in Portugal confirms that Intel LS/JP-IK solutions have better TCO compared to competing solutions worldwide. This result is part of the effort by Intel LS and

JP-inspiring knowledge to draw on its global reach and unparalleled deployment experience to conduct TCO research that helps optimize TCO and confirm the solution's success at doing so.

The scale of this study, which considers TCO across some 3,389 schools and 16,000 classrooms, includes all elementary grade classrooms in the country. Interim findings from the application of the GESCI TCO model to Project Magellan deployment of an assumed figure of just over 811,000 devices<sup>1</sup> indicates the following:

- **TCO per year of €55 (US\$69) per student** for the total solution<sup>2</sup>

In addition to the cost of the devices, this expense of just US\$348 per student over five years (US\$69 per student per year) includes the costs of educational content, maintenance and support, and teacher and administrator professional development.

These results confirm that Intel LS and JP-inspiring knowledge provide a cost-effective approach for building sustainable 1:1eLearning. With deployed solutions in more than 70 countries, Intel LS and its Alliance members, like JP-IK, are helping build better futures all over the world.

<sup>1</sup> EDUCATION IMPACT, MARCH 2012, SECTION 1.4.

<sup>2</sup> EDUCATION IMPACT, MARCH 2012, SECTION 7.6.1.

## Intel® Learning Series

Advancing Education Worldwide

Education Solution Provider





# Total Cost of Ownership

## (TCO) on 1:1 eLearning Solutions



JP-Inspiring Knowledge is the largest OEM deploying Intel Classmate-based educational netbooks, operating in more than 70 countries and having delivered over 4 million CMPCs around the world.

The JP-IK total solution helps facilitate predictable budgeting cycles for governments and a manageable project framework over the long term. At the same time, customers can reduce costs by choosing and customizing the hardware and software features most appropriate to their needs.

It is extraordinary how little data is available on the TCO of ICT within education... if this scale of investment was applied within the private sector there would have been greater expectations about the rigor and scale of the required TCO studies."

- Education Impact, March 2012.

## Study Background



This study considered the indications of the GESCI framework ([www.gesci.org](http://www.gesci.org)), who specifies that TCO includes initial and recurring costs at central-government and local school levels. The basis for this study was the ILS/JP-IK deployment of 811,000 class-mates PCs in Portugal, known as "Project Magellan".

**3,400**  
Schools

**160,000**  
Classrooms

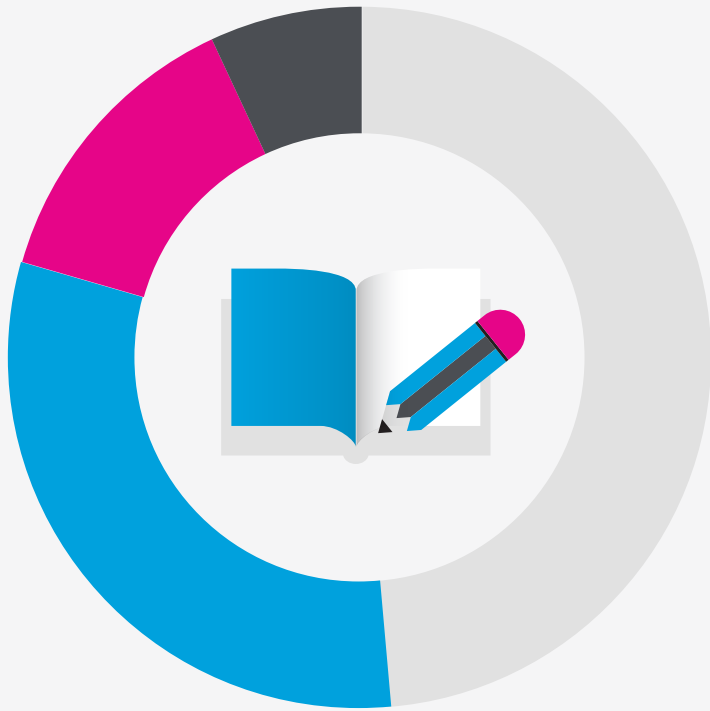


**811K**

**JP-IK/Intel Classmate  
based PCs deployed**



# 5-Year TCO Cost Structure

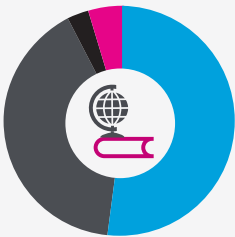


**Proven total solution is cost-optimized and the Intel LS solution makes TCO predictable.**

- Initial School Costs: 49%
- 5-year Recurring School Costs: 30%
- Recurring Central Costs: 14%
- Initial Central Costs: 7%

## 5-Year Central Costs

- Teacher Training & support
- Content and Software
- Management, Monitoring, & Reporting
- Maintenance & Technical Support



## 5-year Initial School Costs

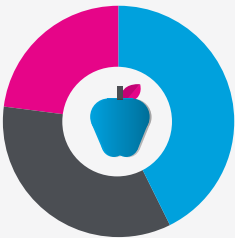
43% of the total 5-year TCO is spent on acquiring CMPCs



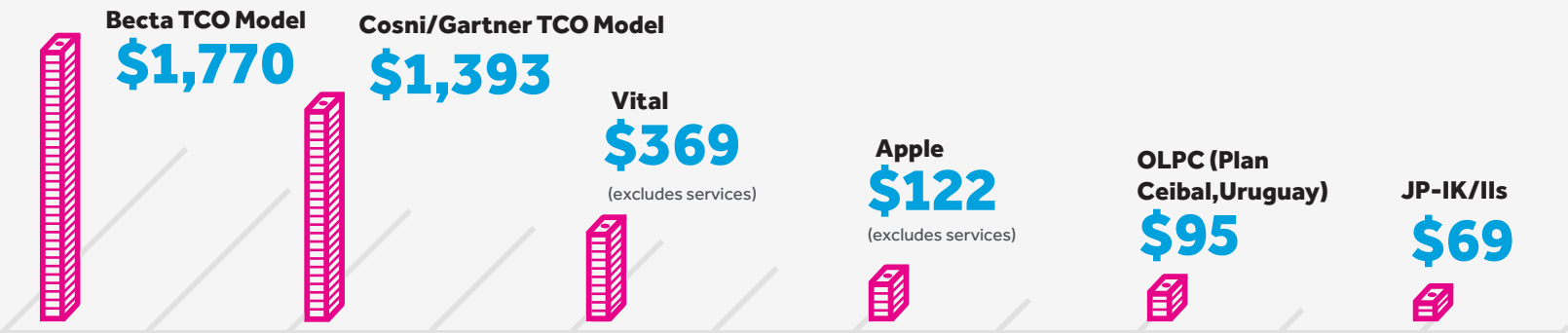
## 5-Year Recurring School Costs

A significant portion to schools recurring costs are attributed to the development of localized content and software applications.

- Maintenance & Technical Support = 44%
- Operation of Technical Platform = 33%
- Content & Software Applications = 23%



## Cost compared to Competition



In addition to the cost of the devices, this expense of US\$69 per student per year includes the costs of educational content, maintenance and support, and teacher and administrator professional development.

JP-IK has a long experience on the deployment of national 1:1 learning projects. This experience allowed us to develop a different range of solutions with a cost lower than \$100 per student/year.

Intel® Learning Series  
Advancing Education Worldwide  
Education Solution Provider





# A UNIQUE COVER DESIGN IN THE 4<sup>TH</sup> EDITION OF THE MG TIMES



Born and raised in Moscow, Yulia Brodskaya is a Russian artist and illustrator, based in the United Kingdom since 2004. With a Master of Art in Graphics Communication degree, Yulia started her career as a freelance graphic designer, but quickly and naturally switched to the illustration domain. Her greatest artistic expressions – Textile Painting, Origami and Collage – have given rise to the artwork that made her famous: the papergraffics.

very popular technique in the 19th century, applied by ladies of leisure who quilled their time way between meals.

In this twenty-first century, Yulia Brodskaya brings innovative paper illustrations that have not been leaving anyone indifferent. The artist has works done for several publications - The Guardian, Washington Post, The New York Times Magazine, WIRED - and brand names like Nokia, Starbucks and Hermes. She also designed one of the Google Chrome themes.

"While keeping the overall piece very catchy and colourful, I wanted it to be light and airy – that's why I incorporated multiple color particles flying upwards. In my mind, these particles symbolize the ease and positive experience that learning process should provide for children. I also used a shape of the globe in my design, in order to highlight the universality of 21<sup>st</sup> century education.

The lettering treatment is something completely new; I have never done anything like this before: the letters design is very simple and geometrical, but visually appealing at the same time. I believe this was a successful experiment.

The overall design goal was to create a very unique, joyful and inspiring artwork that would encourage the readers to go ahead and explore the great content of the publication, and find out more about learning with technology of the future."

Yulia Brodskaya about the cover art of *The mg Times 4*



Papergraffics is based on an old technique called Quilling, in which ribbons of colored paper are cut, then wrapped round a quill (or a stick or straw), with curls as the result. These are then glued onto a backing card and built up into images and text. This was a



## JP-INSPIRING KNOWLEDGE WINS INTERNATIONAL AWARD FOR EDUCATION

**JP-inspiring knowledge has won a World Education Summit Award in the category "Best Innovation in Teaching and Learning Technologies". This is already the second international prize received by the company in 2012, after the Learning Without Frontiers Award.**

JP-inspiring knowledge was distinguished as private sector initiative in the category "Best Innovation in Teaching and Learning Technologies", during the ceremony of the World Education Summit, held in New Delhi, India. The election was ultimately down to a jury composed of members from the scientific board of several universities in India and Malaysia.

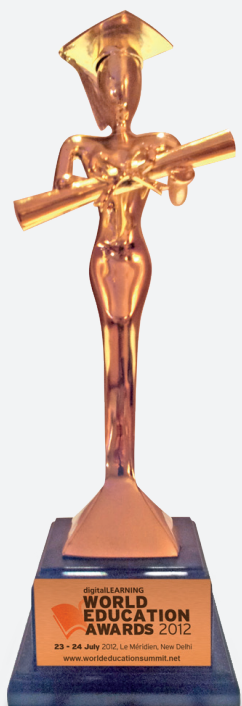
The development of educational projects such as the Magellan program in Portugal, the Ceibal Plan in Uruguay, and the Canaima initiative in Venezuela continue to justify the recognition of the impact of JP-

inspiring knowledge in the 21<sup>st</sup> century Education. Renowned companies like Microsoft and Cisco were also nominated for the awards.

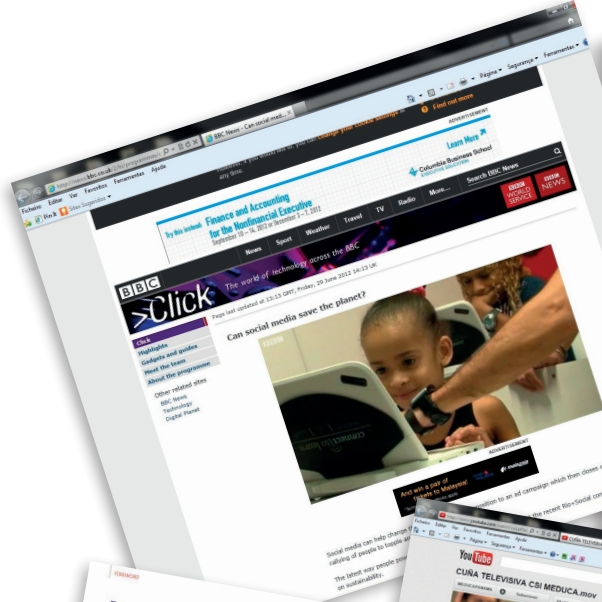


WES is the world's premier platform on education thought leadership, being jointly organized by renowned institutions such as the Indian Ministry of Labour and Employment and UNESCO. The Awards celebrate and recognize institutions that strive for innovation and excellence in global education.

Earlier this year, JP-inspiring knowledge won another international award for Education, in the category "Primary and Pre School Innovation", given by Learning Without Frontiers Organization.







## 6 Société et Culture

### E-Éducation

# Inauguration de la première salle de classe numérique du Gabon

J.K. MOUSSAVOU  
Libreville/Gabon

celle-ci marque, en réalité, le début du processus d'introduction progressive des technologies de l'information et de la communication (TIC) dans notre système éducatif.

Le ministre de l'Éducation nationale, Séraphin Moundounga, a procédé à l'inauguration de la première salle de classe numérique du Gabon en compagnie de l'ambassadeur de l'Émirat des Émirats arabes unis, Blaise Louembe, du directeur général de l'Agence nationale des infrastructures éducatives et des fréquences, Alex



Le ministre de l'Éducation nationale, Séraphin Moundounga, (d) et le directeur général de l'Agence nationale des infrastructures éducatives et des fréquences, Alex Louembe, lors de l'inauguration de la première salle de classe numérique du Gabon.

celle-ci est entièrement équipée d'un matériel informatique, qui permet à l'enseignant, via son ordinateur portable, de faire des cours, tout en ayant un accès à des ressources pédagogiques. Sur ce que font les ordinateurs portables, il dit que toutes les activités effectuées en classe classique

complissent à travers l'outil informatique. Ce qui génère des avantages indéniables et permet l'expérimentation de nouvelles méthodes pédagogiques.

tags résultant de l'éducation. Cette inauguration, qui s'inscrit dans le droit fil des recommandations des États généraux de l'éducation, de la recherche et de l'adéquation de l'emploi, tenus à

des technologies de l'information et de la communication (TIC) dans notre système éducatif. D'autant que, « à la chaîne rentrée », une cinquantaine de classes numériques devraient voir le jour dans les prochaines semaines, à l'ind



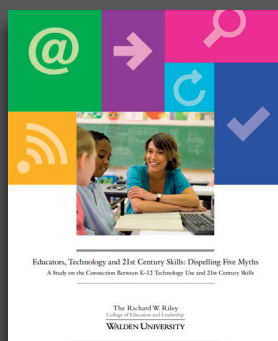
Echange de paraphe entre le ministre de l'Éducation nationale, Séraphin Moundounga, (d) et le directeur de la société portugaise JPSA Couto.

Moundounga. Pour ce faire, le ministre de l'Éducation nationale a paraphé une convention entre son département et la société portugaise JPSA Couto, dirigée par l'expert en technologies de l'information et de la communication (TIC) dans notre système éducatif. D'autant que, « à la chaîne rentrée », une cinquantaine de classes numériques devraient voir le jour dans les prochaines semaines, à l'ind



## NEWS

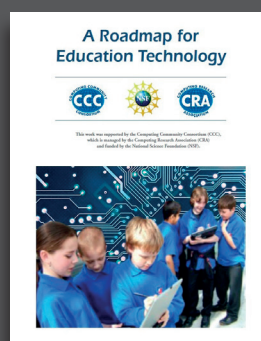
## RESOURCES



### EDUCATORS, TECHNOLOGY AND 21<sup>ST</sup> CENTURY SKILLS: DISPELLING FIVE MYTHS

This study on the connection between K-12 Technology use and 21<sup>st</sup> century skills is an important tool to help today's teachers being more effective. The more they use technology on their classes, the more they recognize the advantages for students' learning and engagement. Walden University's Richard W. Riley College of Education and Leadership dispels all the myths surrounding technology and the undeniable skills of the future.

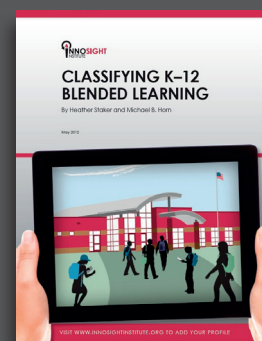
Download: [http://www.waldenu.edu/Documents/Degree-Programs/Full\\_Report\\_-\\_Dispelling\\_Five\\_Myths.pdf](http://www.waldenu.edu/Documents/Degree-Programs/Full_Report_-_Dispelling_Five_Myths.pdf)



### A ROADMAP FOR EDUCATION TECHNOLOGY

Funded by the National Science Foundation (NSF) and supported by the Computing Community Consortium (CCC), this report describes the initial results of several collaborative workshops, in order to study the role of technology and computing in Education. The authors reinforce that it is not about predicting the future, but about the evaluation of possibilities and opportunities for the 21<sup>st</sup> century education.

Download: <http://www.cra.org/ccc/docs/groe/GROE%20Roadmap%20for%20Education%20Technology%20Final%20Report.pdf>



### CLASSIFYING K-12 BLENDED LEARNING

This white paper was written by the Innosight Institute, a non-profit organization dedicated to research in Education and Healthcare. In constant expansion, "blended learning" is a concept to be explored, analyzed and, above all, defined. "Classifying K-12 Blended Learning" is a demystifying report, presenting updated models and identifying several education practices that share features of this 21<sup>st</sup> century phenomena.

Download: <http://www.innosightinstitute.org/innosight/wp-content/uploads/2012/05/Classifying-K-12-blended-learning2.pdf>





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