Public Expenditure on Education in Latin America. Can It Serve the Purposes of the Paris Open Educational Resources Declaration?

Karisma Foundation

Written by
Amalia Toledo
with support from
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In matters of culture and knowledge,
we loose but what we keep,
we gain but what we give away.
Antonio Machado

An invitation to debate

More than three centuries ago, the thinker, poet and British politician John Milton published one of the most important and famous texts against censorship: Areopagitica. It was one of the catalysts for a major debate on the protection of freedom of expression and press.

Many centuries before him, the Greeks formed solid arguments on the importance of doxa (opinion) for democracy.

Discussions on the centrality of freedom of expression and access to information and knowledge for democracies, development, protection and promotion of other human rights are far from new.

However, there is no doubt that the advancement of new information and communication technologies, in particularly the growth of Internet, offers a unique and unprecedent dimension to these discussions.

As a result of this technological upsurge, we can observe impacts on the protection and promotion of human rights, on the consolidation of democracies, on fostering development, on decision-making processes, on public policies as well as on the everyday lives of citizens.

The advancement of knowledge societies is closely linked to the extensive discussions on the universal right to freedom of expression and access to information; in an increasingly connected world. Press freedom, media development, privacy, the role of ICTs in public policies, open governments, preservation of documentary heritage, media and information literacy are among the many issues that are on the table.

The UNESCO Office in Montevideo, seeking to enhance its role as laboratory of ideas, is now offering its stakeholders this Communication and Information Discussion Papers.

Written by leading experts from each field, the main objective is to provide inputs for decision makers and policy makers so they can take into account the different angles of the current issues on the international agenda, always having as a main line the international standards.

These papers do not intend to be the final word. Instead, they aim to contribute to an ever increasing, plural and well-informed debate on key issues of yesterday, today and tomorrow.

Happy reading!

Follow the money!

In the widely acclaimed movie 'All the President's Men,' the source who went by the name of 'Deep Throat' advised, Bob Woodward and Carl Bernstein, the first journalists to investigate the Watergate case for the Washington Post, to follow the money trail.

This recommendation is not only useful for investigative journalists or when there is a suspicion of corruption; it is pivotal to understand that budgets are also a central part of any public policy. Therefore, to establish whether the well-intentioned political promises are translated into concrete actions involves identifying, among other things, the volume of financial resources allocated to a given policy.

This is what Amalia Toledo, Carolina Botero and Luisa Guzman from the Karisma Foundation offer us in this text.

According to the UNESCO Paris Declaration on Open Educational Resources (OER), these materials include all resources for teaching, learning and research in the public domain with an open license to be used, adapted and freely distributed.

The Declaration calls on all stakeholders, including governments to develop educational policies that involve the concept of OER. What are the specific indicators to evaluate whether Open Educational Resources are already incorporated into public education policies?; and most importantly, if they are being incorporated, how useful are they?

There are several answers to this question, one of which can be found in the report "Public Expenditure on Education in Latin America. Can it serve the purpose of the Paris Open Education Resources Declaration?" To analyse the public expenditure in the design, production and distribution of educational content (traditional or digital) is key to designing open educational resource policies.

In this report the authors analyze the national constitutions and laws of five countries, Argentina, Chile, Colombia, Paraguay and Uruguay. The text crosses this discussion with a wider debate on information and communications technologies in education. They also offers suggestions and recommendations to be analysed before OER begins to take shape in the region.

We expect this text to be an important contribution to decision-makers and policy makers interested in reforming education policies. We also hope that it will encourage those who are considering introducing Open Educational Resources, those in the process of building content and those actors who feature in the universe of education to move forward.

Enjoy the reading!

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Resumen ejecutivo

Durante la última década, el rápido avance de las tecnologías permite que sea extremadamente fácil para las personas crear y compartir materiales. Esto no es compatible con el derecho de autor que requiere que el usuario pida la autorización a los titulares de derechos con el fin de poder utilizar una obra. El desarrollo de las licencias abiertas y los recursos educativos abiertos (REA) ayuda a abordar esta brecha, transformando y cuestionando el paradigma actual.

Hay múltiples definiciones del término. Una de las más recientes, la recoge la *Declaración de París sobre los Recursos Educativos Abiertos*[1] (2012) de la Organización de las Naciones Unidas para la Educación, la Ciencia y la Cultura (Unesco). En ésta se entiende que estos recursos incluyen cualquier material de enseñanza, aprendizaje o investigación en el dominio público o publicadas con una licencia abierta, para ser utilizados, adaptados y distribuidos gratuitamente.

Sabemos que estos recursos constituyen una oportunidad estratégica para mejorar la calidad de la educación, facilitar el diálogo sobre políticas, promover el intercambio de conocimientos, favorecer el aumento de capacidades y hacer más accesible la educación. Unesco reconoce esto y considera que fomentar su desarrollo, uso y apropiación también es una forma de promover el derecho humano a la educación.

Precisamente, la Declaración de París recoge esto en una apuesta por la promoción de los REA. Propone que la creación de una cultura de apropiación y uso de estos recursos, indefectiblemente, está supeditada a la implantación de planes de incentivos para su producción con fondos públicos.

En el informe *Gasto público en la educación de América Latina, ¿puede servir a los propósitos de la Declaración de París sobre los Recursos Educativos Abiertos?* identificamos y analizamos las políticas públicas a través de la inversión y gastos que algunos gobiernos de América Latina declaran hacer en el desarrollo y adquisición de textos escolares, libros y contenidos digitales para la educación básica y media (K-12). El propósito es reconocer y proponer acciones para una ruta de acción hacia políticas que aprovechen los postulados de la Declaración.

Antes de presentar los principales resultados del informe, advertimos que tomamos unas decisiones que deben ser consideradas a la hora de revisarlo:

1. Evaluamos la situación de cuatro países del Cono Sur: Argentina, Chile, Paraguay y Uruguay. Incluimos Colombia por el interés particular de la Fundación Karisma. Brasil quedó deliberadamente fuera, pues, ya existe un estudio al respecto publicado en 2010[2].

2. Aunque los REA suelen asociarse con recursos digitales, nada evita que incluyan también los físicos. En América Latina, los contenidos digitales conviven con y complementan a los tradicionales (textos escolares y libros impresos). Por ello, analizamos tanto los recursos educativos en papel como los digitales.

3. Dado que el texto escolar impreso sigue teniendo un papel protagónico en los sistemas de educación de la región, evaluamos la forma en que dicha adquisición se produce.

4. Los datos que usamos provienen de la información pública que como ciudadanas y ciudadanos interesados encontramos en fuentes públicas primarias o secundarias, o que fueron suministrados por funcionarios públicos de los países analizados.

5. Este informe está enmarcado en la definición de REA que adopta la Declaración de París. Reconocemos la importancia de otros elementos de la definición (i.e. alcance de los REA, barreras tecnológicas y legales) y la necesidad de establecer estándares para su implementación, pero en este informe no nos detenemos a analizar tales aspectos.

Derecho a la educación, financiación vs. rendimiento académico, y los REA

La educación es fundamental para el desarrollo social y económico de un país. Es un derecho reconocido en las principales normativas internacionales de derechos huma-

1. Unesco (2012). *Declaración de París sobre los Recursos Educativos Abiertos.* Disponible en http://www.unesco.org/new/fileadmin/MULTIMEDIA/HQ/CI/WPFD2009/Spanish_Declaration.html.

2. ROSSINI, Carolina (2010). *GreenPaper: The State and Challenges of OER in Brazil: From Readers to Writers?* Massachusetts, United States: Berkman Center for Internet and Society. Disponible en http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1549922##.

nos, y en las constituciones y leyes nacionales de los cinco países objeto del informe. Estos países han avanzado en el cumplimiento de sus obligaciones internacionales. La cobertura del sistema educativo a nivel básico y medio es prácticamente universal, siendo gratuita y obligatoria. Sin embargo, la realidad legal no necesariamente se refleja en la práctica. Todavía persisten muchos desafíos en la región como asegurar una educación de calidad, mejorar las capacidades docentes, apropiar las tecnologías digitales en la enseñanza y aprendizaje, fortalecer los contenidos educativos, maximizar el gasto público en educación, etc.

Los países de América Latina gastan importantes cifras de su presupuesto nacional en educación: entre un 4% y 5% de su Producto Interno Bruto. Pese a esto, el rendimiento académico de sus estudiantes, comparado con otros países con gastos promedios similares, sigue en la cola de la lista. Creemos que puede mejorarse la eficiencia del sistema maximizando el gasto destinado a subsidios para la producción y adquisición de textos escolares y, en general, de recursos educativos.

Aunque es común que los gobiernos distribuyan materiales educativos gratuito para su uso, la aproximación se limita a dar bienes de consumo a un sector cuyas prácticas pedagógicas modernas están pensadas para la reutilización. Existen muchas ventajas en favorecer que educadores y estudiantes sean agentes activos en la creación, uso, adaptación y mejora de sus materiales. Estos incluyen la posibilidad de personalizar los contenidos a las necesidades locales, actualizarlos, y, en general, aprovechar la inversión pública de manera más eficiente.

La filosofía detrás de los REA modifica la lógica de consumo del mercado editorial, pensando en la eficiencia de la inversión pública y resaltando que lo que se financia con dinero público debe ser público. Además, los REA promueven una visión sobre el conocimiento como un producto social colectivo accessible y que pueda ser utilizado por todas y todos. Estos recursos, por tanto, otorgan la oportunidad de aprovechar la inversión pública para desarrollarlos o adquirirlos, modificando las relaciones entre los sistemas educativos y la industria editorial.

La Declaración de París marca el compromiso de los gobiernos con la promoción del licenciamiento abierto para los recursos educativos financiados con fondos público. Su convicción de que los REA promueven los objetivos de los más relevantes instrumentos internacionales de derechos humanos y de que pueden ser herramientas adecuadas para mejorar los logros de las políticas públicas educativas de la región, soportan esta aspiración.

Puntos claves del análisis

Difícilmente podemos concluir que las políticas estatales sobre adquisición de recursos educativos en los países analizados coinciden con los principios enunciados en la Declaración de París, aunque algunas iniciativas o programas de alguna manera se alinean con el movimiento de los REA. De los resultados del análisis algunas comparaciones pueden hacerse al respecto.

1. Algunos de los países estudiados han incrementado su inversión en educación en forma sostenida durante los últimos años, mas no exponencialmente. Chile y Paraguay, no obstante, se distancian de esta tendencia, pues, según las cifras reportadas, sus esfuerzos no han sido suficientes. A pesar de la ausencia de datos concretos sobre el gasto en la compra de materiales educativos, los recursos adquiridos son repartidos de forma gratuita, sin que los gobiernos hayan pensado más allá de esa opción. Creemos que la dificultades que enfrentamos a la hora de encontrar los datos sobre este gasto, esencialmente, se debe a que los propios gobiernos no tienen sistematizada esta información de modo que puedan identificarla.

2. De los datos hallados, sabemos que el gasto en educación está sustancialmente relacionados con los costos administrativos y de funcionamiento, que oscilan entre un 75-95% del presupuesto educativo. Si se considera que el porcentaje restante incluye subsidios, transferencias para entidades privadas, el gasto en la adquisición de recursos educativos, entre otros, puede suponerse que la proporción dedicada a la dotación de textos escolares no debe significar un gasto desmesurado.

3. Los esquemas nacionales de adquisición de textos escolares y libros responden a un modelo de consumo del mercado editorial. La dotación de textos escolares, en general, es el de adquisición de bienes por parte de la administración pública a través de modelos estandarizados (i.e. licitación pública). Algunos proyectos aislados proponen desde un inicio el desarrollo de materiales y costean la producción de textos, pero a la hora de contratarlos siguen la lógica de la adquisición comercial.

4. El Estado se ha convertido en un agente pasivo del mercado editorial, otorgándole un fuerte poder económico a esa industria. Esta situación no es negativa por sí misma, pero podría aprovecharse para desarrollar modelos de mutuo beneficio que exploren los postulados de la Declaración de París.

5. A pesar de lo marginal de los gastos nacionales en la adquisición de textos escolares, es un porcentaje sustancial de los mercados editoriales de cada país. Además, la participación de editoriales extranjeras presenta una tendencia creciente en el mercado editorial escolar: un 25% en Colombia, 35% en Argentina y 47% en Chile.

6. El segundo principio de la Declaración de París —"Crear entornos propicios para el uso de las TIC"—, parece ser el que más ha avanzado en la región. En los cinco países existe un interés político específico por avanzar y priorizar las tecnología digitales en la educación. Sin embargo, solo Uruguay y Colombia, de alguna manera, relacionan esto con aproximaciones a lo abierto que podrían asociarse con el concepto REA.

7. Los países analizados se han ocupado de proveer recursos educativos gratuitos en entornos digitales. En este sentido, la preocupación central de la política pública ha sido la de alimentar los portales educativos con recursos de acceso público, mas no ha habido una reflexión profunda sobre el tipo de licencia adoptada.

8. Algunos proyectos de producción de contenidos digitales, si bien tienden a reproducir esquemas de adquisición del mundo análogo, presentan un cierto interés de los gobiernos por ir más allá de la gratuidad. Uruguay, en el contexto del Plan Ceibal, está negociando licencias de uso de materiales por dos años. Colombia y Argentina han explorado con concursos públicos la cesión de derechos de los contenidos concursantes. No obstante, ninguno tiene los alcances de un proyecto REA.

9. De los datos recopilados, deducimos que el gasto público para adquirir materiales educativos no hace parte de una política de Estado. La administración de turno tiene total libertad de decidir, promoviendo iniciativas y proyectos en ausencia de lineamientos generales. El único ejercicio que avanza en ese sentido es la *Estrategia Nacional para Recursos Educativos Digitales de Colombia*, en donde se reflexiona sobre la reutilización futura.

10. La reducción de la brecha digital a través de las tecnología digitales en la educación es una preocupación visible en las políticas estatales. La modalidad de un portátil por alumno (*One Laptop Per Child*) predomina. Es política de Uruguay, Argentina y Paraguay. En Chile el modelo varía, pues, busca atender problemas de aprendizaje entregando un portátil por estudiante en el aula. El Ministerio de Educación ha descartado este opción debido a los resultados poco convincentes en otras geografías. Sin embargo, esa decisión se enfrenta a políticas descoordinadas del mismo gobierno, pues, en paralelo, el Ministerio de las Tecnologías de la Información y las Comunicaciones está repartiendo tabletas y portátiles a estudiantes de niveles escolares básico y medio.

11. Creemos que los sistemas de educación siguen dependiendo del texto físico, principalmente, porque siguen anclados a los tradicionales métodos de enseñanza. En este sentido, la brecha digital también es un factor decisivo. La desconfianza en los contenidos digitales y la falta de habilidades para hacer un uso pedagógico de las tecnologías digitales auna a esta siuación. Finalmente, aunque no es evaluado a profundidad en este informe, es probable que el *marketing* de las editoriales escolares influya también en este realidad.

12. Los portales educativos no han sustituido el uso de contenidos físicos ni han transformado los métodos de enseñanza. En Colombia, el pico de mayor uso del

portal educativo "*Colombia Aprende*" es en la noche. Esto indica que no se usa en el aula, y demuestra que los esfuerzos por impulsar la apropiación de tecnologías para la educación no está obteniendo los resultados esperados.

13. Dado que la adquisición que los gobiernos hacen de los textos escolares es un porcentaje importante de la industria editorial, las decisiones que se tomen afectarán a ese sector en forma significativa. La adopción de la Declaración de París requerirá de un diálogo entre gobiernos e industria editorial para transformar la relación actual y fomentar modelos alternativos que no estrangulen al Estado.

En conclusión, los países objetos del estudio no han sabido aprovechar los adelantos tecnológicos y los principios adelantados por el movimiento de los REA. La adopción de políticas públicas sobre REA puede tener ventajas concretas en la educación pública: aumento de las oportunidades de aprendizaje y mayor acceso al conocimiento; fortalecimiento de las comunidades educativas y, por ende, un sistema educativo más robusto; reforzamiento y diversificación de los currículos educativos; y reducción de los costos educativos, con el consecuente resultado de una educación más accesible. Hoy día, no obstante, el paradigma está anclado en la producción de textos físicos producidos por una industrial cuyo fin es generar capital y no necesariamente velar por un beneficio más amplio para la sociedad.

Recomendaciones

Para transformar los procesos de desarrollo, adquisición y distribución de recursos educativos, los Estados deberán convertirse en facilitadores, incentivando a los actores de los sistemas de educación a producir contenidos. Esto deberá ir acompañado de políticas de transparencia que den cuenta del uso de los dineros público y que incluyan evaluaciones progresivas del impacto de dichos usos. También es necesario que el Estado fomente las redes de comunidades educativas, de modo que se conviertan en plataformas desarrolladoras e impulsoras de los REA, es decir, en productoras colaborativas de conocimiento, que reciban el apoyo de las editoriales pero que no dependan de ellas exclusivamente. De este modo, creemos, podrá modificarse el modelo de consumo del sistema en uno de cooperación.

En suma, para que los países de la región puedan abordar los retos y propuestas de la Declaración de París deberán ajustar sus políticas sobre el gasto público en desarrollo y adquisición de recursos educativos. En este sentido, recomendamos:

1. **Reajustar el modelo de adquisición**. Los Estados y la industria editorial deberán renegociar su relación. La industria deberá cambiar su posición y servir de apoyo al desarrollo de capacidades para la producción sostenible de materiales de aprendizaje de calidad por el propio sistema educativo. Es necesario dotar al profesorado con materiales que puedan reutilizar, reformular, y no solo "consumir". Los gobiernos deberán modificar las condiciones de adquisición de textos escolares, desarrollando la idea de que los recursos públicos son un bien al servicio de la comunidad educativa. El cambio más significativo será el de imponer el uso de licencias abiertas que faciliten la búsqueda, recuperación e intercambio de materiales.

2. **Crear mayores y efectivos enlaces entre los programas de uso pedagógico de las tecnologías digitales y la producción de materiales digitales que cumplan los estándares internacionales de los REA**. La sinergia que se impulse a nivel de políticas públicas podrá solventar muchos de los actuales problemas de falta de pertinencia, diversidad y calidad de los materiales educativos.

3. **Desarrollar indicadores para medir el impacto de las políticas públicas sobre REA**. Aspectos como el uso de fondos público en su producción, la apropiación de los mismos, entre otro, pueden ser medidos. El desarrollo de estos indicadores permitirá realizar un mejor examen del gasto público en la producción de recursos educativos.

4. **Desarrollar un análisis económico del gasto estatal en la producción y compra de materiales educativos**. Tal análisis deberá medir el precio real de la producción de recursos educativos en el mercado editorial. Creemos que este estudio permitiría a los Estados comprender —y quizá también a las editoriales escolares— que arriesgar por los REA es apostar fuertemente por la educación.

5. **Producir mejor información, datos e indicadores a nivel estatal sobre los gastos en desarrollo y adquisición de recursos educativos**. Si esta información estuviera compendiada y recopilada, el Estado mismo estaría en mejor posición para llevar a cabo evaluaciones de impacto sobre tales gastos. Esta labor también requerirá del desarrollo de indicadores que faciliten realizar dicho análisis.

6. **Sensibilizar y capacitar a la comunidad educativa (funcionarios administrativos, personal docente, estudiantado) sobre los REA y las ventajas de su adopción en el proceso educativo**. El compromiso con los postulados de la Declaración de París exige un entorno conocedor del tema, que entienda sus ventajas. Por tanto, es importante que la comunidad educativa comprenda que el movimiento de los REA va más allá de la gratuidad en el acceso y de los esfuerzos por utilizar las tecnologías en el aula de clase.

Estamos convencidos que los REA pueden significar un cambio importante para un más amplio desarrollo de la sociedad latinoamericana y mejorar los resultados de su sistema educativo. Por ello, deberá ser una meta de los gobiernos y de la sociedad civil trabajar en la difusión de las características de los REA e impulsar la efectiva adopción de la Declaración de París.

Executive Summary

During the last decade, the rapid advancement of technologies that make it extremely easy for people to create and share materials is out of alignment with copyright law, which requires that user ask permission form rightholders in order to use a work. The development of open licensing and Open Educational Resources (OER) helps address this gap, by changing and questioning the current paradigm.

There are multiple definitions of this concept. One of the most recent is described by the UNESCO Paris OER Declaration (2012)[1]. In this instrument, it is understood that these resources include any teaching, learning or research material in the public domain or published with an open license to be used, adapted and distributed free of charge.

We know these resources are a strategic opportunity to improve the quality of education, facilitate policy dialogue, foster knowledge sharing, promote capacity building and make education more accessible. UNESCO recognizes this and believes that encouraging their development, use and adoption is also a way of promoting the human right to education.

Indeed, the Paris OER Declaration reflects this in a call for promoting these resources. It proposes that the creation of a culture of OER adoption and use, inevitably, is subject to the implementation of incentive plans for their development with public funds.

In the report entitled *Public Expenditure on Education in Latin America. Can It Serve the Paris OER Declaration's Purposes?*, we identify and analyze public policy and the investment and spending that some Latin American governments commit to make in the development and purchasing of textbooks, books and digital content for primary and secondary education (K-12). The aim is to identify and propose actions to pave the way toward policies that harness the Declaration's principles.

Before presenting the report's main findings, it is worth mentioning a series of choices involved in its creation that must be considered upon its review:

1. We analyzed the situation of four Southern Cone countries: Argentina, Chile, Paraguay and Uruguay. We included Colombia due to the particular interest that it represents for Karisma Foundation. Brazil was intentionally left out, as there is already a study on the matter, published in 2010[2].

2. Although OER are usually associated with digital resources, there is nothing that prevents them from also including physical materials. In Latin America, the digital content coexists with and complements the traditional ones (printed textbooks and books). Therefore, we analyzed both educational resources in print and in digital.

3. Since the paper textbook continues to have a leading role in the education systems of the region, we assessed how such acquisition occurs.

4. The data we used comes from the public information that, as concerned citizens, was found in primary or secondary public sources, or was provided by government officials of the countries analyzed.

5. This report is built around the OER definition in the Paris Declaration. We acknowledge the importance of other elements of the definition (i.e. the scope of OER, technological and legal barriers) and the need to establish standards for their implementation, but in this report we did not take time to analyze these related aspects.

Right to education, funding vs. academic performance, and OER

Education is key to a country's social and economic development. It is a right recognized by the major international human rights instruments, as well as by the national constitutions and laws of the five countries covered by this report. These countries have made progress in meeting their international obligations in relation to this right. Within these five countries, the coverage of the education system at primary and secondary level is almost universal, being free and compulsory. However, the legal reality

1. UNESCO (2012). *Paris Open Educational Resources Declaration*. Available on http://www.unesco.org/new/fileadmin/MULTIMEDIA/HQ/CI/CI/pdf/Events/Paris%20OER%20Declaration_01.pdf.

2. ROSSINI, Carolina (2010). *GreenPaper: The State and Challenges of OER in Brazil: From Readers to Writers?* Massachusetts, United States: Berkman Center for Internet and Society. Available on http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1549922##.

is not necessarily reflected in practice. There are still many challenges in the region such as maximizing public spending on education and ensuring the quality of the education provided by such things as improving teaching skills, effectively adopting digital technologies in teaching and learning and strengthening educational content.

The Latin American countries spend large numbers of their national budget on education: between 4% and 5% of GDP. Despite this, the academic performance of their students, compared to those countries with similar average budgets, falls at the bottom of the global list. We believe it can be improved by maximizing the efficiency of spending on subsidies for the production and purchase of textbooks and, in general, of educational resources.

Although it is common for governments to distribute educational material for its free use, the approach is limited to offering consumer goods to a sector, whose modern teaching methods are designed for reusing. There are many advantages to encourage educators and students to being active agents in the creation, use, adaptation and improvement of their materials. These include being able to customize content to local needs, updating out-of-date materials, and in general leveraging public investments more efficiently.

The OER philosophy changes the consumption logic of the publishing market by considering the efficiency of public investment and emphasizing that what is funded with public funding should be public. In addition, the OER promote a vision on knowledge as a collective social product accessible and useable for everyone. These resources, therefore, provide the opportunity to leverage public investment in developing or purchasing them, changing the relationship between education systems and the publishing industry.

According to the Paris Declaration, OER are materials for teaching, learning and research, in any medium, that are in the public domain or published under open licenses, allowing free access, use, adaptation and redistribution by others with no or minimal restrictions. Their features enhance collaboration and reduce educational process cost.

The Paris Declaration marks the governments' commitment in promoting the use of open licensing for publicly funded educational resources. Its assertion that OER foster the objectives of the most relevant international human rights instruments, and are suitable tools to improve educational policy achievements in the region, supports the above-mentioned aspiration.

Key points in the analysis

One can hardly conclude that government policies for educational resource procurement are lined up with the Paris OER Declaration's principles, although some initiatives or programs are to some extent aligned with the OER movement. Based on the finding in the analysis, some comparisons can be made.

1. Some of the countries studied have seen some sustained –yet not exponential– growth on education investment in recent years. Chile and Paraguay are exceptions to this trend, where perhaps the effort has not been sufficient. Despite the lack of specific spending data on educational material purchasing, the resources acquired are distributed for free. We believe that the difficulties we faced would appear to be due to the fact that the countries themselves have not systematized this information in such a way that it is easily identifiable.

2. From the data collected, we know that educational spending is substantially related to administrative and operative expenses, ranging from 75% to 95% of the education budgets. Assuming that the remaining percentage includes subsidies, transfers to private entities, spending on the educational resources acquisition, among others, it may be supposed that the proportion allocated to school textbook procurement does not entail an inordinate expense.

3. Textbooks and book purchasing schemes at national level respond to a consumer model of the publishing market. The textbook provision, in general, is the acquisition of goods by public administrations through standardized models (i.e. competitive bidding). Some isolated projects propose, from the beginning, the development of material and textbooks, and the budget for that, but when it is time for contracting, the commercial purchasing logic is followed.

4. The State has become a passive agent of the publishing market, granting a strong economic power to that industry. This situation is not negative in itself, but could be used to develop a mutually beneficial model, in which the Paris OER Declaration's principles might be explored.

5. Despite the marginal percentage of national expenditure on textbook purchasing, it is a substantial percentage of book markets for each country. In addition, the participation of foreign publishers presents a growing trend in the school-book market: 25% in Colombia, 35% in Argentina and 47% in Chile.

6. The Paris Declaration's second principle – "Facilitate enabling environments for use of Information and Communications Technologies" - seems to be the most advanced in the region. There is a political interest in the five countries to advance and prioritize digital technology for education. However, only Uruguay and Colombia, somehow, relate these with approaches to openness that might be associated with the OER concept.

7. The countries analyzed are taking action in providing free educational resources in digital environments. In this sense, the public policy's main concern has been to supply educational portals with publicly accessible resources, but there has not been a profound reflection on the type of license adopted.

8. Some digital content production projects, although they tend to reproduce purchasing schemes of the analog world, show the governments' interest to go beyond the public access. Uruguay, in the Plan Ceibal context, has been negotiating material licensing for two years. Colombia and Argentina have explored public tenders and rights transfer of content contestants. However, none has the scope of an OER project.

9. From the data collected, we deduce that public spending for all education materials is not part of a State policy. On the contrary, it falls at the mercy of succeeding administrations that promote initiatives and projects in the absence of general guidelines. The only exercise advancing in this regard is Colombia's National Strategy for Digital Educational Resource, where a reflection on future reuse can be found.

10. Reducing the digital divide through including digital technology in education is a visible concern in State policies. The model "One Laptop Per Child" is well established. It is a clear policy in Uruguay, Argentina and Paraguay. In Chile, the model varies because it seeks to address learning problems and deliver one laptop per student in the classroom. In Colombia, the Ministry of Education discarded this program due to the inconclusive results in other geographical areas. However, that decision is facing uncoordinated policies, in which the Ministry of Information and Communication Technologies is in the midst of a national campaign to distribute tablets and laptops to basic and high school levels.

11. We believe that education systems continue to rely on paper textbooks mainly because they are still anchored on traditional teaching methods. The digital divide is also a decisive factor. Distrust of digital content and lack of skills to make pedagogical use of digital technologies can be another reason. Finally, although not deeply evaluated in this report, it is likely that the schoolbook publishing industry's marketing strategies also influence this reality.

12. The educational portals have not replaced the use of physical materials nor have they transformed teaching methods. In Colombia, the hours of peak usage of the educational portal "*Colombia Aprende*" happen at night. This suggests that the portal is underused in the classroom, and demonstrates that domestic efforts to promote the technologies for education do not have the expected results.

13. Since national school textbooks purchases play a significant role in the publishing industry, any future decisions will affect this sector significantly. The Paris Declaration's adoption will require a dialogue between governments and the publishing industry in order to transform the current relationship and to foster alternative models that do not overburden the government.

In conclusion, the existing systems in the countries studies have not learned how to make the most of recent technologies or of the principles envisioned by the OER movement. The adoption of OER policies can harvest concrete advantages in pub-

lic education: enhancing learning opportunities and greater access to knowledge; reinforcing the educational communities thereby creating a more robust education system as a result; strengthening and diversifying educational curricula; and reducing educational cost, resulting in a more accessible education. Today, however, the paradigm is rooted in the paper textbook by an industry motivated by profit rather than by the benefit of society.

Recommendations

By transforming the processes of educational resources development, acquisition and distribution, States should become facilitators, encouraging the actors within education systems to produce content. This should be accompanied by transparency policies that account for the use of public funding and include progress impact assessments of such uses. Moreover, the State ought to identify and foster existing communities that are proliferating thanks to technological enablers, and help them become platforms for the development and promotion of OER, i.e., collaborative knowledge producers. Thus, we believe the consumption model should be modified into one of cooperation.

If countries in the region are to be able to take on the challenges and proposals of the Paris OER Declaration, they must make adjustments to their public spending policies in educational materials. These reforms can be summarized as follows:

1. **Readjusting the acquisition model.** States and the publishing industry shall renegotiate their relationship. The industry could shift to providing support to improve the capacities of the educational system with the goal of sustainably developing quality educational materials. It is necessary to provide teachers with materials they can reuse and repurpose, not only "consume." Governments ought to consider modifying the textbook purchasing conditions, developing the idea that public sources are goods serving the educational community. The most significant change resides in the use of open licences, facilitating materials' search, reuse and sharing.

2. **Building stronger links between pedagogical use of digital technologies programs and digital materials production that fulfill OER international standards.** The synergy that will be boosted at the public policy level may solve many of the current problems of lack of relevance, diversity and quality of educational materials.

3. **Developing indicators to measure OER public policy impact.** Aspects such as the use of public funding in their production and adoption, among others, shall be measured. The development of these indicators shall allow for a better public expenditure assessment in the educational resources production.

4. **Conducting an economic analysis of State investment on educational resources acquisition.** Such analysis shall measure the real price of educational resources production in the publishing market. We believe this study would also allow States to understand —and perhaps schoolbook publishers as well— that taking the chance to produce OER is a strong move for education..

5. **Producing better information, data and indicators at the State level on educational resource development and acquisition expenditure.** If this information were to be lifted and compiled, the State itself would be in a better position to conduct its own impact assessment for these expenditures. Any such process will require indicators designed to facilitate this analysis.

6. **Raising awareness to, and training for, the educational community (administrative staff, faculty, students) on OER and the advantages of its adoption in the educational process.** The commitment to the Paris Declaration's principles requires a knowledgeable environment, which understands OER advantages. Hence, it is important that the educational community understands that the OER movement goes beyond the public access and efforts to use technologies in the classroom.

We are convinced that OER might mean a significant change for a broader development of Latin American society and improve their educational system's outcomes. Therefore, it shall be a goal of governments and civil society working on disseminating OER's features and fostering the effective adoption of the Paris Declaration.

Resumo executivo

Durante a última década, o rápido avanço das tecnologias permite que seja extremamente fácil para as pessoas criar e compartilhar materiais. Isso não é compatível com direitos autorais que requerem que o usuário peça permissão aos detentores desses direitos, a fim de poder utilizar uma obra. O desenvolvimento do licenciamento aberto e dos recursos educativos abertos (REA) ajuda a resolver esta lacuna, transformando e desafiando o paradigma atual.

O termo tem sido definido de diversas maneiras. Uma das mas recentes foi apresentada na *Declaração de Paris sobre os Recursos Educativos Abertos* (2012)[1] da Organização das Nações Unidas para a Educação, a Ciência e a Cultura (UNESCO). Nesta entende-se que estes recursos incluem todos os materiais de ensino, aprendizagem ou pesquisa de domínio público ou publicados sob uma licença aberta, para serem utilizados, adaptados e distribuídos gratuitamente.

Sabemos que estes recursos constituem uma oportunidade estratégica para melhorar a qualidade da educação, facilitar o diálogo sobre as políticas públicas, promover o intercâmbio de conhecimentos, favorecer o aumento de capacidades e melhorar a acessibilidade à educação. A UNESCO reconhece isto e considera que fomentar o seu desenvolvimento, uso e apropriação também é uma forma de promover o direito humano à educação.

Justamente, a Declaração de Paris reúne estas questões e aposta na promoção dos REA. A Declaração propõe que a criação de uma cultura de apropriação e uso destes recursos está condicionada à implantação de programas de incentivos para a sua produção com fundos públicos.

No relatório Gastos públicos na educação da América Latina:é um tema relevante paraos propósitos da Declaração de Paris sobre os Recursos Educativos Abertos? Identificamos e analisamos as políticas públicas a través do investimento e despesas que alguns governos da América Latina declaram fazer no desenvolvimento e aquisição de textos escolares, livros e conteúdos digitais para a educação básica e média (K-12). O objetivo é reconhecer e propor ações para um plano de ação em direção a políticas que aproveitem as premissas da Declaração.

Antes de apresentar os principais resultados do relatório, advertimos que tomamos decisões que devem ser levadas em conta ao fazer a revisão:

1. Avaliamos a situação de quatro países do Cone Sul: Argentina, Chile, Paraguai e Uruguai. Incluímos a Colômbia pelo interesse particular da Fundação Karisma. O Brasil ficou deliberadamente fora, pois existe um estudo ao respeito publicado em 2010[2].

2. Ainda que os REA sejam normalmente associados ao digital, nada impede que se inclua também o físico. Na América Latina, os conteúdos digitais convivem e complementam os conteúdos tradicionais (textos escolares e livros impressos). Por tanto analisamos os materiais pedagógicos em papel e digitais.

3. Dado que o texto escolar impresso tem um papel principal nos sistemas de educação da região, avaliamos a forma em que tal aquisição se produz.

4. Os dados que utilizamos no estudo provem de informação pública que como cidadãs e cidadãos interessados encontramos em fontes públicas primarias ou secundárias. Outros dados foram fornecidos por funcionários públicos dos países analisados.

5. Este relatório está inserido na definição de REA que adota a Declaração de Paris. Reconhecemos a importância de outros elementos da definição (i.e. alcance dos REA, as barreiras tecnológicas e legais) e a necessidade de estabelecer padrões para implementá-los, porém neste relatório não analisaremos tais questões.

1. Unesco (2012). Declaração de Paris sobre os Recursos Educativos Abertos. Disponível em http://www.unesco.org/new/fileadmin/MULTIMEDIA/HQ/CI/WPFD2009/Spanish_Declaration.html.

2. ROSSINI, Carolina (2010). *Green-Paper: The State and Challenges of OER in Brazil: From Readers to Writers?* Massachusetts, United States: Berkman Center for Internet and Society. Disponível em http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1549922##.

Direito à educação, financiamento vs. rendimento acadêmico e os REA

A educação é fundamental para o desenvolvimento social e econômico de um país. É um direito reconhecido pelas principais normativas internacionais de direitos humanos, nas constituições e nas leis nacionais dos cinco países objeto do informe. Estes países avançaram no cumprimento das obrigações internacionais. A cobertura do sistema educativo a nível básico e médio é praticamente universal, sendo gratuita e obrigatória. No entanto, a realidade legal não precisamente se reflete na prática. Ainda persistem muitos desafios na região, entre eles, garantir uma educação de qualidade, melhorar as capacidades docentes, a apropriação das tecnologias digitais pelo ensino e na aprendizagem, fortalecer os conteúdos educativos, maximizar o gasto público em educação, etc.

Os países da América Latina gastam importantes cifras do seu orçamento nacional em educação: entre 4% e 5% de seu Produto Interno Bruto. Apesar disto, o rendimento acadêmico de seus estudantes, comparado com outros países com gastos médios similares ainda está no fim da lista. Pensamos que a eficiência do sistema pode ser melhorada ao maximizar o dinheiro destinado aos subsídios para a produção e aquisição de textos escolares e, em geral, de recursos educativos.

Ainda que seja comum que os governos distribuam materiais educativos gratuitamente para seu uso, a aproximação se limita a dar bens de consumo a um setor cujas práticas pedagógicas modernas estão pensadas para a reutilização. Existem muitas vantagens em favorecer que educadores e estudantes sejam agentes ativos na criação, uso, adaptação e melhora de seus materiais. Estas incluem a possibilidade de personalizar os conteúdos em acordo com as necessidades locais, atualizá-los, e, em geral, aproveitar de forma mais eficiente o dinheiro público, entre outras.

A filosofia detrás dos REA modifica a lógica de consumo do mercado editorial, pensando na eficiência do investimento público e destacando, que o que se financia com dinheiro público deve ser público. Além disto, os REA promovem uma visão sobre o conhecimento como um produto social coletivo acessível a todas e todos. Estes recursos, portanto, outorgam a oportunidade de aproveitar o investimento público para desenvolvê-los ou adquiri-los, modificando as relações entre os sistemas educativos e a indústria editorial.

A Declaração de Paris marca o compromisso dos governos com a promoção de licenças abertas para os recursos educativos financiados com fundos públicos. Tem-se a convicção de que os REA promovem os objetivos dos mais relevantes instrumentos internacionais de direitos humanos. Esta aspiração é sustentada pelo fato de que os REA podem ser ferramentas adequadas para melhorar os resultados das políticas públicas educativas da região.

Pontos-chave da análise

Dificilmente podemos concluir que as políticas estatais sobre aquisição de recursos educativos nos países analisados coincidem com os princípios enunciados na Declaração de Paris, ainda que algumas iniciativas ou programas se alinham com o movimento dos REA. Dos resultados da análise, algumas comparações podem se fazer ao respeito.

1. Alguns dos países pesquisados aumentaram seu investimento na educação, de forma permanente, durante os últimos anos, porém de maneira tímida. Chile e Paraguai, contudo, se distanciam desta tendência, pois, segundo as estatísticas apresentandas, seus esforços não foram suficientes. Apesar da ausência de dados concretos sobre as despesas de compra de materiais educativos, os recursos adquiridos são distribuídos gratuitamente, sem que os governos tivessem pensado além dessa opção. Acreditamos que as dificuldades que enfrentamos na hora de procurar os dados sobre esta despesa se devem, principalmente, a que os próprios governos não têm sistematizada esta informação de maneira que possam identificá-la.

2. Dos dados encontrados, sabemos que a despesa em educação está substancialmente relacionada com os custos administrativos e de funcionamento, o quais oscilam entre 75 e 95% do total do orçamento para educação. Se considerarmos que a porcentagem restante inclui subsídios, transferências para entidades privadas, aquisição de recursos educativos, entre outros, pode se supor que

a proporção dedicada à dotação de textos escolares não deve significar uma grande despesa.

3. Os esquemas nacionais de aquisição de textos escolares e livros se dão, no geral, pela aquisição de bens por parte da administração pública através de modelos estandardizados (i.e. licitação pública). Alguns projetos isolados propõem, desde o início, o desenvolvimento de materiais e custeiam a produção de textos, mas na hora de contratá-los seguem a lógica da aquisição comercial.

4. O Estado tem se tornado um agente passivo do mercado editorial, outorgando um forte poder econômico a esta indústria. Esta situação não é negativa em si mesma, mas poderia ser aproveitada para desenvolver modelos de benefício mútuo que explorem os princípios da Declaração de Paris.

5. Apesar da marginalidade das despesas nacionais na aquisição de textos escolares, é uma porcentagem substancial dos mercados editoriais de cada país. Além disso, a participação de editoras estrangeiras apresenta uma tendência crescente no mercado editorial escolar: 25% na Colômbia, 35% na Argentina e 47% no Chile.

6. O segundo princípio da Declaração de Paris -"Criar ambientes propícios para o uso das TIC"-, parece ser o que mais avançou na região. Nos cinco países existe um interesse político por melhorar e priorizar as tecnologias digitais na educação. No entanto, só o Uruguai e a Colômbia, de alguma maneira, relacionam isto com aproximações ao aberto que poderiam se associar com o conceito de REA.

7. Os países analisados têm se ocupado em fornecer recursos educativos gratuitos em ambientes digitais. Neste sentido, a preocupação central da política pública tem sido a de alimentar os websites educativos com recursos de acesso público, mas não houve uma reflexão profunda sobre o tipo de licença adotada.

8. Alguns projetos de produção de conteúdos digitais, ainda que tendam à reprodução de esquemas de aquisição do mundo analógico, apresentam certo interesse dos governos por ir além da gratuidade. O Uruguai, no contexto do Plan Ceibal, está negociando licenças de uso de materiais por dois anos. A Colômbia e a Argentina exploraram com editais públicos a cessão de direitos dos conteúdos apresentados no edital. No entanto, nenhum tem os alcances de um projeto de REA.

9. Dos dados recopilados, deduzimos que o gasto público para adquirir materiais educativos não faz parte de uma política de Estado. A administração em curso tem total liberdade para decidir, promovendo iniciativas e projetos em ausência de lineamentos gerais. O único exercício que avança deste modo é a Estratégia Nacional para Recursos Educativos Digitais da Colômbia, onde se reflexiona sobre a reutilização futura.

10. A redução da brecha digital através das tecnologias digitais na educação é uma preocupação visível nas políticas estatais. A modalidade de um laptop por aluno (*One Laptop Per Child*) é predominante. É política no Uruguai, na Argentina e no Paraguai. No Chile o modelo varia, pois, busca atender problemas de aprendizagem entregando um portátil por estudante na sala de aula. O Ministério de Educação tem desconsiderado essa opção devido aos resultados pouco convincentes em outras geografias. No entanto, essa decisão se enfrenta à políticas descoordenadas do mesmo governo, pois, em paralelo, o Ministério das Tecnologias da Informação e das Comunicações está repartindo tablets e computadores portáteis aos estudantes de níveis escolares básico e médio.

11. Acreditamos que os sistemas de educação seguem dependendo do texto físico, principalmente, porque seguem ancorados aos tradicionais métodos de ensino. De modo que a a brecha digital também é um fator decisivo. A desconfiança nos conteúdos digitais e a falta de habilidades para fazer uso pedagógico das tecnologias digitais somam-se à esta situação. Finalmente, ainda que não seja avaliado neste informe, é provável que o marketing das editoras escolares exerça influência também nesta realidade.

12. Os websites educativos não têm substituído o uso de conteúdos físicos nem tem transformado os métodos de ensino. Na Colômbia, o pico de maior uso do portal

educativo "Colômbia Aprende" é à noite. Isto indica que não se usa no momento da aula, e demonstra que os esforços por impulsar a apropriação de tecnologias para a educação não obtém os resultados esperados.

13. Dado que a aquisição que os governos fazem dos textos escolares constitui uma porcentagem importante da indústria editorial, as decisões que se tomem afetarão a esse setor de maneira significativa. A adoção da Declaração de Paris requererá um diálogo entre governos e indústria editorial para transformar a relação atual e fomentar modelos alternativos que não sufoquem o Estado.

Em conclusão, os países objeto da pesquisa não souberam aproveitar os progressos tecnológicos e os princípios adiantados pelo movimento dos REA. A adoção de políticas públicas sobre os REA pode ter vantagens concretas na educação pública: aumento de oportunidades de aprendizagem e maior acesso ao conhecimento; fortalecimento das comunidades educativas e, por conseguinte, um sistema educativo robusto; reforço e diversificação dos currículos educativos e redução dos custos educativos, com o consequente resultado de uma educação mais acessível. Hoje em dia, no entanto, o paradigma está ancorado na produção de textos físicos produzidos por uma indústria cujo fim é gerar capital e não necessariamente velar por um benefício mais amplo para a sociedade.

Recomendações

Para transformar os processos de desenvolvimento, aquisição e distribuição de recursos educativos, os Estados deverão se converter em facilitadores, incentivando os atores dos sistemas de educação a produzir conteúdos. O que deverá ser acompanhado de políticas de transparência que exponham o uso do dinheiro público e as avaliações progressivas do impacto daqueles usos. Também é necessário que o Estado fomente as redes de comunidades educativas, de maneira que se tornem plataformas desenvolvedoras e impulsoras dos REA, isto é, em produtoras colaborativas de conhecimento que recebam apoio das editoras, mas que não dependam exclusivamente delas. Assim, acreditamos que poderá se modificar o modelo de consumo do sistema em um modelo de cooperação.

Em suma, para que os países da região possam abordar os desafios e propostas da Declaração de Paris deverão ajustar suas políticas de despesa pública em desenvolvimento e aquisição de recursos educativos. Por conseguinte, recomendamos:

1. **Reajustar o modelo de aquisição**. Os Estados e a indústria editorial deverão renegociar sua relação. A indústria deverá mudar de posição e servir de apoio ao desenvolvimento das capacidades necessárias para a produção sustentável de materiais de aprendizagem de qualidade pelo próprio sistema educativo. É preciso prover o corpo docente com materiais que possam reutilizar, reformular e não só "consumir". Os governos deverão modificar as condições de aquisição de textos escolares, desenvolvendo a ideia de que os recursos públicos são um bem ao serviço da comunidade educativa. A mudança mais significativa será a de impor o uso de licenças abertas que facilitem a busca, recuperação e intercâmbio de materiais.

2. **Criar maiores e efetivos vínculos entre os programas de uso pedagógico das tecnologias digitais e a produção de materiais digitais que cumpram os padrões internacionais dos REA**. A sinergia que se impulsione ao nível de políticas públicas poderá colaborar com o equacionamento de muitos dos atuais problemas de falta de pertinência, diversidade e qualidade dos materiais educativos.

3. **Desenvolver indicadores para medir o impacto das políticas públicas sobre REA**. Itens como o uso dos fundos públicos na sua produção, a apropriação dos mesmos, entre outros, podem ser medidos. O desenvolvimento destes indicadores permitirá realizar um melhor exame do gasto público na produção de recursos educativos.

4. **Desenvolver uma análise econômica do gasto estatal na produção e compra de materiais educativos**. Tal análise deverá medir o preço real da produção de recursos educativos no mercado editorial. Acreditamos que esta análise permitirá aos Estados compreender – e provavelmente também às editoras escolares – que se arriscar pelos REA é apostar fortemente na educação.

5. **Produzir melhor informação, dados e indicadores a nível estatal sobre as despesas em desenvolvimento e aquisição de recursos educativos**. Se esta informação estivesse compendiada e recopilada, o próprio Estado estaria em condições para levar a cabo as avaliações de impacto destas despesas. Este trabalho também requer o desenvolvimento de indicadores que facilitem realizar dita análise.

6. **Sensibilizar e capacitar a comunidade educativa (funcionários administrativos, corpo docente, corpo discente) sobre os REA e as vantagens de sua adoção no processo educativo**. O compromisso com os princípios da Declaração de Paris exige um ambiente conhecedor da temática e que entenda suas vantagens. Portanto, é importante que a comunidade educativa compreenda que o movimento dos REA vai além da gratuidade no acesso e dos esforços por utilizar as tecnologias na sala de aula.

Estamos convencidos que os REA podem significar uma mudança importante para ampliar o desenvolvimento da sociedade da América Latina e melhorar os resultados do seu sistema educativo. Por conseguinte, deverá ser um objetivo dos governos e da sociedade civil trabalhar na difusão das características dos REA e impulsionar a efetiva adoção da Declaração de Paris.

Public Expenditure on Education in Latin America

Can It Serve the Purposes of the Paris Open Educational Resources Declaration?

I. Introduction

During the last decade, the need to make the most of living in a technologically enabled, fully interconnected world —in which it is possible to communicate anything quickly, over long distances, to mass audiences, and with minimal or much lower investment than ever before— and to process large quantities of information available online, clashes against the fact that most of the content that we access "belongs to somebody" or has been locked by technical means that prevent its reuse, and therefore, in practice, has had its legal use restricted.

It is in this context that, in order to facilitate access to knowledge, a series of standards have been created around the concept of Open Educational Resources (OER) that enable this interaction. There are multiple definitions of this concept. *The Paris Open Educational Resources Declaration,* born out of the United Nations Education, Science and Culture Organization (UNESCO) in 2012, proposed one of the more recent definitions, and it establishes that

> *[...] open educational resources are teaching, learning or research materials that are in the public domain or released with an intellectual property license that allows for free use, adaptation, and distribution.*

Perhaps the first clear, high-impact initiative recognized as OER was that of Open Courseware at the Massachusetts Institute of Technology (MIT), described by Johnstone and Poulin in one of the first writings that address the topic explicitly[1]. MIT developed a repository of information related to its courses, which is posted on the Internet for anyone to use and reuse (e.g. translate). The publication in 2002 of a set of open licenses created by the Creative Commons Foundation made it easier for the project, which adopted them immediately, to formalize its idea of legal reuse[2]. Since then, a myriad of educational projects have adopted these standards.

But what advantages do these resources offer? Many arguments have been proposed in their favor. On one hand, it is said that OER improve access to information, increasing opportunities for learning and the application of knowledge to a broader context. They also support formal, self-guided, peer-reviewed learning. Furthermore, these resources allow feedback between agents in a broad network of users (teacher-teacher, student-teacher, etc.). They can even contribute to enhance the reputation and visibility of teachers and of an educational institution. Likewise, they broaden and diversify the educational curriculum by expanding the exchange of ideas between diverse individuals and communities. Finally, OER contribute to the affordability of education by reducing the production costs of educational materials.

After a decade of existence and development of the OER concept, the Paris Declaration adopts an interesting position. It proposes that the creation of a culture of appropriation and use of these resources depends invariably on the use of incentives that stimulate the adoption of OER standards for published materials financed by the state. This posture forces us to examine public investment and expenditure by States in the development and procurement of educational materials. Information resulting from such analysis will allow us to make recommendations to better align public expenditure with the goals of the Declaration.

With this goal in mind, and insofar as the sources available permitted, this document identifies and analyzes investment and expenditure policies reported by governments for developing and procuring school textbooks as well as digital content for primary and secondary school (K-12). The purpose of this document is to propose a roadmap for developing policies that advance the objectives of the Paris OER Declaration.

Regarding the scope of this report, it is worth mentioning a series of choices involved in its creation that must be considered upon its review:

1. Even though OER are generally associated with digital resources, since it is a concept derived from Information and Communication Technologies (ICTs), there is nothing that prevents them from also to included physical materials.

2. We have chosen to analyze expenditures in both paper and digital educational resources. Thus, we account for the fact that ICT penetration in the region, and in the public

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1. Johnstone, M. y Poulin, R. (2002). What is OpenCourseWare and Why Does It Matter?. *Change.* 34(4).

2. For more information, visit the Creative Commons website at www.creativecommons.org

primary education in particular, is not yet pervasive. It is important to highlight the fact that digital contents coexist with and complement traditional materials (textbooks, books, etc.).

3. The data presented is either publicly available and can be accessed by concerned citizens in primary or secondary sources, or has been provided by education ministry officials from the countries studied. Therefore, our analysis was based upon information provided by the States themselves. We expect that anyone shall have the capacity to evaluate and audit the figures noted here, but for the moment this fact shall remain as an annotation.

4. In this report, we mainly sought to examine the situation of four Southern Cone countries: Argentina, Chile, Paraguay and Uruguay. We have included Colombia, as it is of particular interest for Karisma Foundation. Brazil was deliberately left out, as there is already a recent study (2010) published on this subject. In the report prepared by Carolina Rossini, entitled *Green-Paper: The State and Challenges of OER in Brazil: From Readers to Writers?*, she analyzes the state of the art for OER in view of the Brazilian reality and perspectives[3]. To this end, she assessed the structure, market and policies of Brazilian education, including the development and procurement of textbooks, the incorporation of digital technologies to education, and she examined a few educational open access and OER projects at primary, secondary and post-secondary levels. In broad strokes, it can be highlighted that the study revealed a similar situation than what we found in the countries assessed in this report.

5. The concept of OER does not appear to be well understood in the region, not even by those entities in charge of policymaking and implementation, nor by those active in the educational system. This paints a rather con-

fusing picture, particularly in regards to the production of digital contents.

6. As was pointed out, paper textbooks continue to play a leading role in the region's educational systems. We must therefore evaluate the way in which their procurement takes place. This in turn would allow us to draft recommendations on more efficient ways to conduct public expenditure based on the concept of OER and on the aspirations gathered in the Paris Declaration.

7. As we mentioned, there are multiple definitions of OER, but this report shall focus on the one adopted by the Paris Declaration in order to limit its scope. Similarly, even though we are conscious of the importance of the various concrete elements contained in this definition (e.g. scope of the meaning of resource, details on the technical or legal barriers to guarantee interoperability, etc.) and of the importance of establishing standards for their implementation, the scope of this report does not allow us to bring our analysis to this level of detail. We have only included specific references to the use of open source software or open licenses as a means to identify isolated projects with the standards created for OER.

The report provides context that seeks to locate the issue within the broad field of the right to education as a human right. It also includes figures that account for the relationship between education funding and academic performance. Finally, it attempts to approach OER as a public policy tool. The bulk of this report consists in a comparative analysis between Argentina, Chile, Colombia and Paraguay of public investment in the production, purchase and distribution of educational resources, with the goal of identifying the underlying models for each country. Finally, the document closes with a set of conclusions and recommendations for adjusting and channeling public policy towards the fulfillment of the principles contained in the Paris Declaration.

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3. Rossini, C. (2010). *Green-Paper: The State and Challenges of OER in Brazil: From Readers to Writers?* Massachusetts, USA: Berkman Center for Internet and Society. Available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1549922##.

4. See Article 26 of the *Universal Declaration of Human Rights*; Article 13 of the *International Covenant on Economic, Social and Cultural Rights*; Article 28 of the *Convention on the Rights of the Child*; Article 26 of the *American Convention on Human Rights*; Article 13 of the *Additional Protocol to the American Convention on Human Rights in the Area of Economic, Social and Cultural Rights*; Article 11 of the *African Charter on the Rights and Welfare of the Child*; Article 2 of the *Additional Protocol to the European Covenant for the Protection of Human Rights and Fundamental Liberties*; Article 34 of the *Arab Charter on Human Rights*; among others.

5. Tomasevski, K. (2004). Indicadores del derecho a la educación. *Revista Instituto Interamericano de Derechos Humanos*, 40, pp. 349-351. Available at http://www.juridicas.unam.mx/publica/librev/rev/iidh/cont/40/pr/pr18.pdf.

II. Background

A. The Human Right to Education

Education is the pillar that underlies social and economic development for any society. International, regional and national organizations have also recognized its impact on the promotion and development of equality within and among nations. For these reasons, the right to education has been included in all the major international human rights instruments[4]. The commitments acquired therein with regards to education have therefore been consigned and incorporated into constitutions and legislation of many countries, including the five that are included in this study. So much so, that for each of these we have identified constitutional articles that guarantee the right to free and mandatory education, and establish budgetary allocations for their education systems.

The international human rights system has revealed formulas for the implementation of government obligations in the field of education. The commitments born out of the right to education have been organized into what the Former United Nations Special Rapporteur on the right to education, Katerina Tomasevski, calls the four As: affordability, accessibility, acceptability and adaptability[5].

The first obligation, accessibility, is related to the duty by governments to provide educational establishments that cover all of the population and that respect both freedom in teaching and autonomy in education. The second criterion, Tomasevski mentions, is that of accessibility, which is closely linked to the obligation by governments to progressively guarantee free, mandatory and inclusive education in elementary and secondary levels. In addition, governments have the responsibility to facilitate access to higher education, without this entailing the elimination of tuition fees, as long as these are priced in accordance with the student's payment capacity.

The third government obligation comprises a set of criteria assessing the quality of education, such as health and safety in schools, or teachers' professional capacities, among others. Similarly, it encompasses the rights of minority groups and indigenous peoples to education, and the right to instruction in their respective languages. Acceptability has also been extended to educational programs, textbooks and pedagogical methods, as it is expected that they are adapted to changes in society.

Lastly, adaptability demands that governments adjust education to the needs of girls and boys, and to social changes. In short, it requires the progressive adaptation of education with the aim of strengthening and promoting human rights.

In the course of this investigation it became clear that in the countries studied, governments have taken positive steps towards meeting their international obligations. Coverage of the educational system at primary and secondary levels is practically universal in all five countries. That is, education is free and mandatory at these levels, as a result of policies that have progressively enshrined this government obligation into law, and allocated the necessary resources to make it a reality[6]. Nevertheless, this legal reality is not necessarily reflected in practice.

Many communities and populations have been taken into account when establishing educational programs. For example, in the case of Paraguay, the right of learners to be taught in their mother tongue, be it Spanish or Guaraní, has been enshrined in the law[7]. However, despite the existence of this type of policy, the effort has perhaps been insufficient to ensure the inclusion of, and respect for, these communities/minorities.

Many challenges remain. Among them, Argentina, Chile, Colombia, Paraguay and Uruguay must maximize public spending on education and guarantee the quality of the education provided by such things as improving teaching skills, effectively adopting digital technologies in teaching and learning, and strengthening educational content, among other.

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6   The Argentinian legal system guarantees a minimum of ten years of mandatory schooling (Article 10 of Act 26.206 of 2006). Article 10 of the Chilean Constitution and article 4 of its General Education Act (Act 20.370 of 2009) safeguard the right to free, mandatory education for elementary and secondary levels. The Colombian Constitution, in its Article 67, states that education is a right and that it shall be provided free of charge at official institutions. In addition, the Constitutional Court has ruled that, as part of the international obligations acquired by the Colombian State in guaranteeing this right, education shall be mandatory for children between 5 and 18 years of age and shall be progressively made free of charge. Article 76 of the Paraguayan Constitution establishes free and mandatory elementary education. As of 2010, secondary and early childhood education shall be progressively made free of charge, beginning with tuition and school supplies, as established by Act 4.088 of 2010. Finally, articles 69 to 71 of the Constitution of the Oriental Republic of Uruguay provide for mandatory elementary and secondary education, free public elementary, secondary, higher, industrial and artistic, and physical education, and guarantees freedom of teaching.

7   Article 77 of the 1992 Constitution of the Republic of Paraguay.

B. Regional Education Funding and Educational Performance

State investment in education has the potential to generate significant benefits for their social development, thanks to education's capacity to provide similar opportunities for all[8]. For this reason, a frequent measure used to assess the level of government commitment to education consists in comparing public spending in education with the Gross Domestic Product (GDP).

According to a survey by the Organization for Economic Cooperation and Development (OECD) on educational spending in the region titled "Fiscal Policy and Development in Latin America: What is the Link," published in *Latin America Economic Outlook 2009*, Latin American countries spend significant portions of their national budget on education. This expenditure experienced general constant growth between 2000 and 2008. Nonetheless, although increasing, the efforts of Argentina, Colombia and Uruguay did not show significant growth, whereas Chile and Paraguay were unable to maintain their former levels.

As Chart 1 shows, educational expenditure as related to GDP hovers around 4% or 5%[9]. We therefore know that investment in education by some countries in the region is close to the average for OECD countries. Its ratio per capita, however, is five times higher, due to the fact that the school-age population in Latin America is among a quarter and a third of the total population. For OECD countries, in contrast, it was less than a fifth, according to 2006 figures —the reference figure for the 2009 report—. In the latest *Latin America Economic Outlook 2013* analysis, economic spending in education failed to expand, but it did in its relation to the private sector. However, once again we reiterate that governments in the region must invest more in education to improve the capacities and opportunities of their citizens.

Since 2000, and every 3 years thereon, the OECD has conducted an international learning test —

Programme for International Student Assessment (PISA)— whose objective is to measure competencies in reading, math and science of 15 year olds, without taking into account the grade to which they are enrolled. These results are useful for measuring and comparing student performance in a diverse variety of countries. It also provides policy assessment and recommendations.

In relation to the 2006 PISA results, OECD analyst Pablo Zoido mentioned that, with similar spending as the regional average, countries such as Lithuania or Macao/China have achieved better performance for their students, who come from diverse socio-economic backgrounds[10]. Latin American students, on the other hand, performed three years below when compared to the OECD average (see Chart 2). Besides, their failing scores were much more drastic, given the fact that most students in the region did not achieve a basic level of reading comprehension.

By 2009, Latin American countries that participated in the study had improved their overall performance[11]. However, they are still among the worst performing, as the charts 3, 4 and 5 show[12].

In light of these results, it may be relevant to highlight the OECD's conclusion that "the real priority for the region is to improve the quality of that expenditure by making it more efficient and better targeted."[13] This statement is supported by the fact that, by 2008, Macao/China was the top performing country despite it having a mean spending per capita much lower than the OECD average. This allows us to conclude that it is not incompatible to achieve good performance in education despite low-income levels.

To have a positive impact on educational outcomes, economic policies in this area must target several items simultaneously. As part of direct educational spending, one budget item is allocated to the functioning of a country's educational system. In the countries studied, between 75% and 95% of public spending in education is allotted to the functioning and management of educational

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8. Conclusions of the Programme for International Student Assessment (PISA).

9. See also OECD (2008). Fiscal Policy and Development in Latin America: What is the Link. *Latin America Economic Outlook 2009*, p. 23. Available at http://www.oecd.org/dev/americas/41580526.pdf; and UNESCO & Prelac (2012). *Regional Monitoring Report on Progress Towards Quality Education for All in Latin America and the Caribbean, EFA 2012*. Santiago, Chile: UNESCO, p. 34. http://unesdoc.unesco.org/images/0021/002158/215878e.pdf.

10. Zoido, P. (2008). Public Spending on Education in Latin America: Does it Work? *Policy Insights*, 80. Available at http://www.oecd.org/dev/41561645.pdf.

11. As of the writing of this report, the 2012 PISA results were published, but due to the immediacy, they were not incorporated into this analysis.

12. For a detailed analysis of Latin American academic performance, see Ganimian, A. & Solano Rocha, A. (2011). *Measuring up? How Did Latin America and the Caribbean Perform on the 2009 Programme for International Student Assessment (PISA)?* USA: Partnership for the Revitalization of Education in the Americas. Available at http://www.thedialogue.org/PublicationFiles/Preal_PISA_ENGLowres.pdf.

13. OECD (2008). Improving the Quality of Public Spending: The Case of Education. *Latin America Economic Outlook 2009*, p. 16. Available at http://www.oecd.org/dev/americas/41577384.pdf.
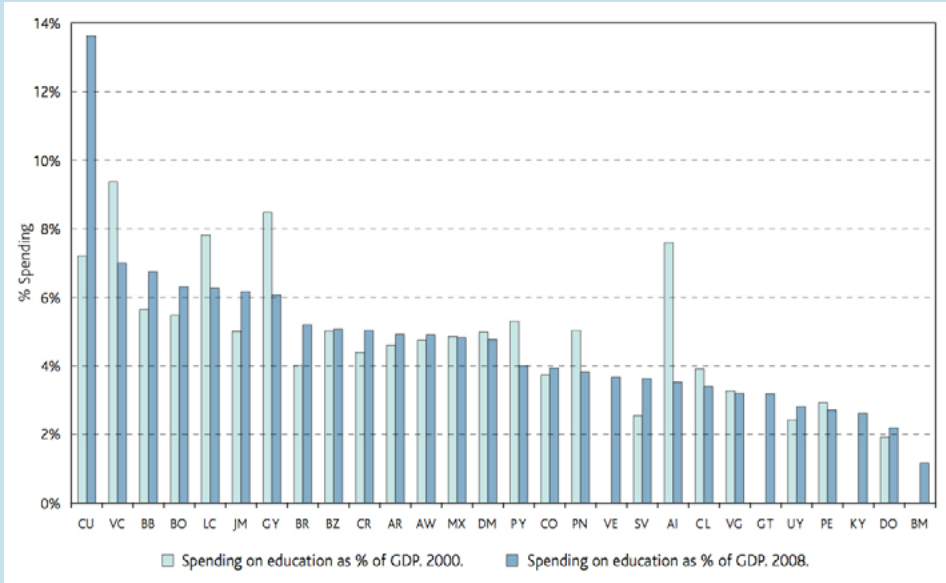
Graph 1.
Public Spending on Education as a Portion of GDP (2000-2008).

Key: AR: Argentina; CL: Chile; CO: Colombia; PY: Paraguay; UY: Uruguay Source: UNESCO Institute of Statistics (UIS) database).
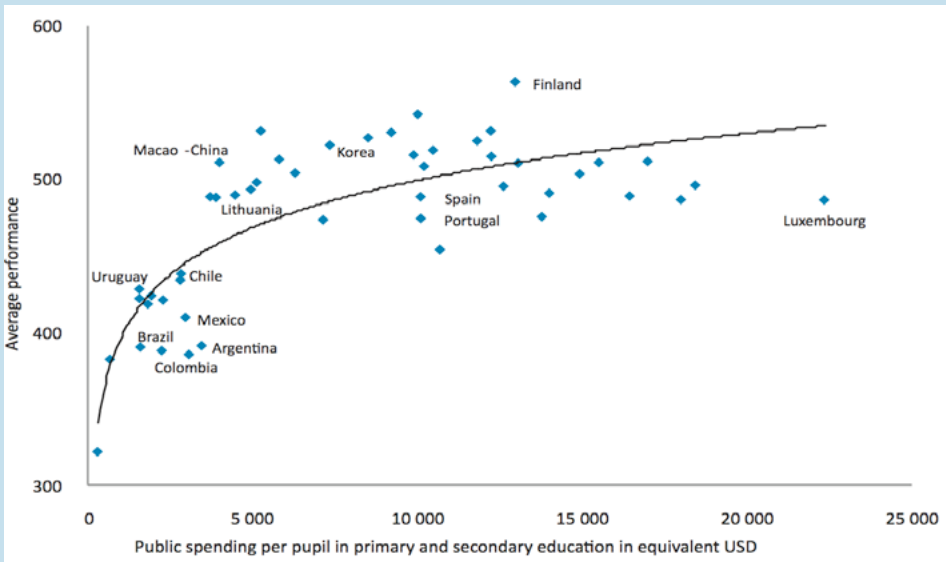
Graph 2.
Public Spending in Education and PISA Performance.

Note: Public spending is the average of available data since 2000. Countries performance average on the PISA science scale. Source: OECD (2009). Latin America Economic Outlook 2009, p. 16. Available at http://www.oecd.org/dev/americas/41577384.pdf.
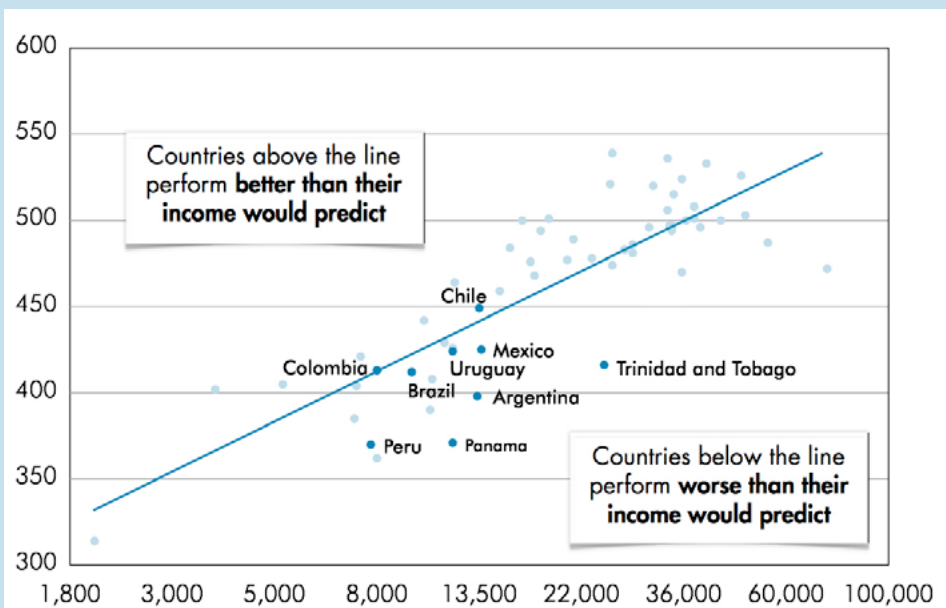
Graph 3. Mean scores on PISA reading test by income per capita, 2009.

Notes: (1) This graph excludes Chinese Taipei, Dubai (UAE), Liechtenstein, Qatar and Shanghai-China, which reported no income data. (2) X-axis shows gross domestic product per capita for 2009 for 2005 constant dollars in purchasing power parity terms, in log scale.. Source: Ganimian, A. & Solano Rocha, A. (2011). Measuring up? How Did Latin America and the Caribbean Perform on the 2009 Programme for International Student Assessment (PISA)? USA: Partnership for the Revitalization of Education in the Americas, p. 46.

systems[14]. Such high percentages are easily accounted for given the labor intensity required for the functioning of educational systems. On the other hand, educational spending is also used to support educational processes. This last item refers to subsidies for the production and purchase of textbooks, and, in general, of educational resources. It is in this type of spending where we propose efficiency could be improved.

C. OER as a Public Policy Tool for Achieving States' Goals

UNESCO first coined the term Open Educational Resources during the "Forum on the Impact of Open Courseware for Higher Education in Developing Countries."[15] At the time it was established that OER are understood as the

> [...] open provision of educational resources, enabled by information and communication technologies, for consultation, use and adaptation by a community of users for non-commercial purposes.

In 2012, the Paris OER Declaration was adopted at the closing of the World OER Congress organized by UNESCO, which gathered governments, experts, civil society, and educators to discuss and share the best current examples related to policies and initiatives in this area.[16].

Even as governments commonly supply the educational system with materials that are free to use, this approach limits itself to providing consumer goods to a sector whose modern pedagogical practices are conceived for re-utilization, particularly when mediated by digital technologies that facilitate collaborative production. There are many advantages in encouraging educators and students to be active participants in the creation, use, adaptation and improvement of their materials. Among them, the chance to localize them to their needs

(e.g. local languages, familiar examples, level of knowledge of a particular community, etc.), update them and make more efficient use of public investment, among others. These were precisely the features highlighted in 2010 in what is known as the *Cape Town Open Education Declaration: Unlocking the Promise of OER*, which draws a roadmap toward openness[17].

In addition, it is important to highlight that the philosophy that underlies OER modifies the consumer logic of the publishing market by focusing on the efficiency of public investment and by stressing that what is funded with public money must remain public. Thus, in the analysis undertaken by Carolina Rossini, expert on OER issues, regarding Brazil, the concept of OER "places educational materials as common and public goods from which all should benefit, [...they consist in] a view that sees knowledge itself as a collective social product that naturally forms a commons that needs to be accessible to all," and therefore, she says, "once the public has paid the resources (through taxes), how should they be managed and made available?"[18] If the answer lies in access to free materials that remain controlled by third parties that do not allow teachers and students to harness the disruptive capacities of digital technologies, we must acknowledge that we are wasting an opportunity: the chance to make the most of this public investment to develop or procure OER and, in so doing, to modify this relationship.

This decade has seen the growth of resources considered OER as well as their number of users[19]. Worldwide, there has been an increase in State-led projects that adopt the principles and standards for OER, and some of them have documented results that demonstrate their efficiency[20]. It is worth mentioning the Open Textbooks project in the U.S. State of Utah, which striven to demonstrate the cost effectiveness of this approach[21]. It is claimed, for instance, that the

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14. According to 2012 figures as presented by the Ministry of Education and Culture of Uruguay in its *Education Statistics Yearbook*, close to 80% of the education budget is allocated primarily to teacher payroll (See Ministerio de Educación y Cultura (2012). *Anuario Estadístico de Educación*). In Colombia, by 2012, 94.3% corresponds to operating expenses, and the remainder to investment expenses (See Ministerio de Educación Nacional (n.d.). *Rendición de cuentas Diciembre 2011 — Septiembre 2012*, p. 84). In Paraguay, public spending in education corresponding to the operations and management line item oscilated between 85% and 95% in the 2000s (see Preal e Instituto de Desarrollo (2013). *El desafío de la equidad. Informe de progreso educativos: Paraguay)*.

15. UNESCO (2002). *Forum on the Impact of Open Courseware for Higher Education in Developing Countries. Final Report.* Paris, France: UNESCO. Available at http://unesdoc.UNESCO.org/images/0012/001285/128515e.pdf.

16. UNESCO (2012). *Paris Open Educational Resources Declaration*. Available at http://www.unesco.org/new/fileadmin/MULTIMEDIA/HQ/CI/CI/pdf/Events/Paris%20OER%20Declaration_01.pdf.

17. The *Capetown Declaration* can be consulted at http://www.capetowndeclaration.org/read-the-declaration.

18. For more information, see Rossini, *op. cit.* (note 3), p. 5.

19. Carson, S. (2006). *MIT OpenCourseWare 2005 Program Evaluation Findings*. Available at http://ocw.MIT.edu/ans7870/global/05_Prog_Eval_Report_Final.pdf. See also OECD & CERI (2007). *Giving Knowledge for Free. The Emergence of Open Educational Resources*. Available at http://www.oecd.org/edu/ceri/38654317.pdf.

20. The Creative Commons website maintains an ongoing record of this type of initiatives, which can be consulted at http://wiki.creativecommons.org/OER_Policy_Registry.
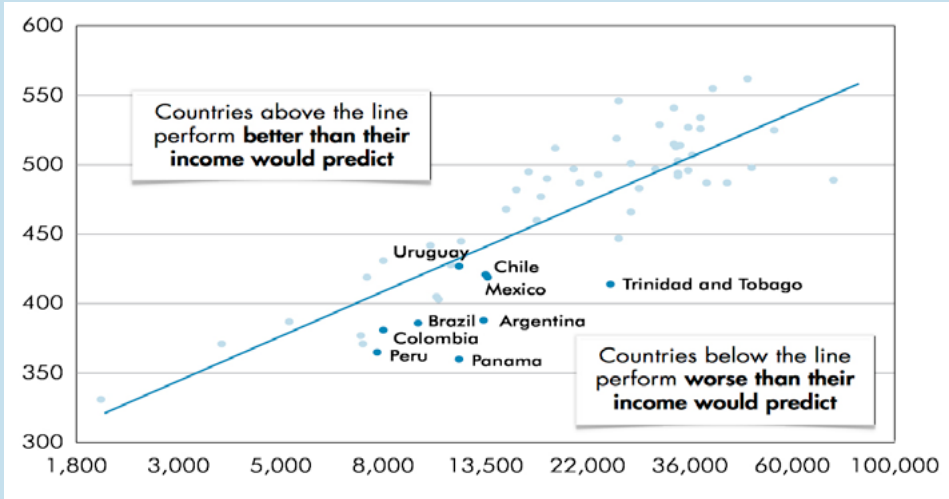
Graph 4. Mean scores on PISA math test by income per capita, 2009.

Notes: (1) This graph excludes Chinese Taipei, Dubai (UAE), Liechtenstein, Qatar and Shanghai-China, which reported no income data. (2) X-axis shows gross domestic product per capita for 2009 for 2005 constant dollars in purchasing power parity terms, in log scale.. Source: Ganimian, A. & Solano Rocha, A. (2011). *Measuring up? How Did Latin America and the Caribbean Perform on the 2009 Programme for International Student Assessment (PISA)?* USA: Partnership for the Revitalization of Education in the Americas, p. 47.
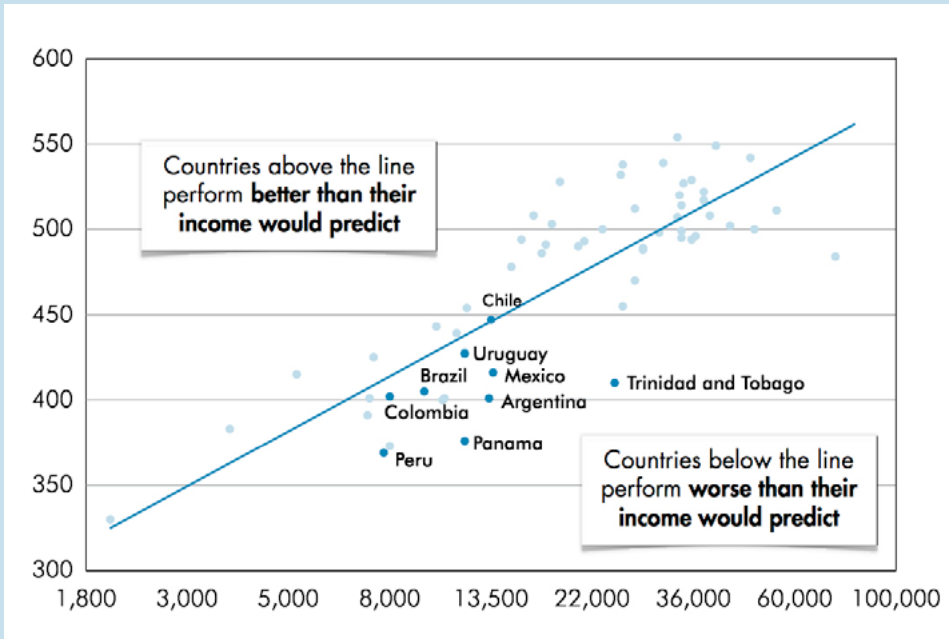
Graph 5. Mean scores on PISA science test by income per capita, 2009.

Notes: This graph excludes 21 education systems participating in PISA 2009, which did not report spending data for primary and secondary for 2008 in 2005 USA constant dollars in purchasing power parity terms, in log scale. Source: Ganimian, A. & Solano Rocha, A. (2011). *Measuring up? How Did Latin America and the Caribbean Perform on the 2009 Programme for International Student Assessment (PISA)?* USA: Partnership for the Revitalization of Education in the Americas, p. 52.

State of Utah manages to produce textbooks for less than 5 dollars each[22]. According to recent academic research, their impact is similar to that of more costly textbooks, i.e., quality is not affected[23]. It is worth pointing out that it is in the English-speaking world where OER have developed most, and therefore, where the majority of data regarding these initiatives and their impact is collected[24]. We still have much room for improvement in other regions, provided we learn from initiatives that have come before, and that we take seriously the proposals of the Paris Declaration.

21. For more information on this project, visit the Utah Open Textbook website at http://utahopentextbooks.org/about.

22. *The $5 Textbook — Now For Less Than $5* (2011, December 16). Available at http://utahopentextbooks.org/2011/12/16/the-5-textbook-now-for-less-than-5.

23 Hilton, J. & Wiley, D. (2012). A Preliminary Examination of the Cost Savings and Learning Impacts of Using Open Textbooks in Middle and High School Service Classes. *The International Review of Research in Open and Distance Learning*, 13(3). Available at http://www.irrodl.org/index.php/irrodl/article/view/1153/2256.

24. Botero, C. & Labastida, I. (2008). *Open Licensing's Impact on Higher Education Resources Colombian and Catalan Approaches.* Spain: Universitat de Barcelona. Available at http://diposit.ub.edu/dspace/bitstream/2445/13688/1/6-Botero.pdf.

The Paris OER Declaration goes beyond demonstrating the potential benefits of this movement. It proposes a commitment by governments to promote open licensing for publicly funded educational resources. This document, thus, transcends the exploration phase in which the possible OER advantages were discussed, and instead proposes discussing their true potential for advancing the objectives of the most relevant international human rights instruments. Open educational resources represent a strategic opportunity to improve the quality and efficiency of education, which is an essential condition for development. OER can contribute to the compliance with international obligations and goals assigned to States, and therefore their promotion ought to be in the hands of governments themselves.

The commitment to mobilize States toward the promotion of standards for investing public resources is evidence of the alignment between the OER objectives and the core function of any public policy.

In order to clarify the options faced by this region, we will now outline education investment for the countries studied.

III. Public Investment in the Production, Purchase and Dissemination of Educational Resources in the Southern Cone and Colombia (Models)

The difficulty in finding information on public sector spending is a widespread problem, and not exclusive to the region[25]. This situation is complicated further if we consider that spending is country-specific, given the varying structures between educational systems, its diverse funding sources, and the fact that it is subject to the way in which functions are distributed between the national and local levels, and between the public and the private sector.

Once again, we must remember that over the past few years, governments in the region have made special commitments to public education, increasing spending in relation to GDP, and increasing the guarantees on the mandatory nature of education.

The impact of government purchases on the Latin American publishing industry is well known. Rosa Dávila, Mexican cultural researcher, asserted in 2005 that

[…] publishing development and production has been largely geared towards meeting the needs of the educational system, for which school textbooks constitute one of the highest impact sectors in local publishing and in the expansion of the book market[26].

The strong dependence of the region's textbook publishing market —closely related to public spending— appears to be corroborated by the Centre for Book Development in Latin America and the Caribbean (CERLALC in Spanish) report *Programs, Official Purchases and Provision of School Textbooks in Latin America*[27]. This dependency relationship is such that any decision adopted by governments in this regard is certain to have direct repercussions in the industry. However, the opposite is also true; precisely, the same relationship has led to significant pressure to make spending for educational materials the engine of an industry, i.e., to focus on responding to the industry's needs.

As the next section in this report shows, a consumption model has prevailed in the region, which obscures discussions regarding the needs of the education sector in regards to co-creation models. This becomes particularly significant in light of the capacities offered by the new technological environment. It is likely that this may help explain the absence of more aggressive initiatives in favor of adopting OER standards, since they would substantially alter the reigning model.

Below, you will find more detailed results among the five countries studied.

A. Argentina

In its Education Funding Act, Argentina established investment on education, science and technology at every level: state, national and municipal. It was expected that on the period 2006-2010 such investment would increase progressively up to 6% of GDP (Article 7 of Act 26.075 of 2005). A monitoring report for the aforementioned law demonstrates that such goal was in fact achieved. Thus, Argentina went from investing 4% of GDP to investing 6%. This allowed it to climb from the 81st to the 19th position in the world ranking of educational investment in relation to wealth[28]. On the other hand, the *Regional Monitoring Report on*

25. Batare, S. (2012). Efficiency of Public Spending on Education. *Public Policy and Administration*, 11(2), pp. 171-186.

26. Dávila, R. (2005). El libro en América Latina: situación actual y políticas públicas. *Boletín Gestión Cultural*, 13.

27. Uribe, R. (n.d.). *Programas, compras oficiales y dotación de textos escolares en América Latina*. Centro Regional para el Fomento del Libro en América Latina y el Caribe. Available at http://www.cerlalc.org/secciones/libro_desarrollo/Textos_Escolares.pdf.

28. Bezem, P., Mezzadra, F. & Rivas, A. (2012). *Informe de monitoreo de la Ley de Financiamiento Educativo*. Argentina: Centro de Implementación de Políticas Públicas para la Equidad y el Crecimiento (CIPPEC), p. 5. Available at http://issuu.com/cippec/docs/im__monitoreo_de_la_ley_de_financiamiento_educativ.

Progress Towards Quality Education for All in Latin America and the Caribbean, EFA 2012 states that in Argentina, private funding for education was reduced by 10%[29]. It must be noted that the available figures do not include sufficient breakdown to identify the percentage of this decrease that corresponds to textbook purchases.

1. School Textbooks and Books

The Argentinian State is responsible for assigning budget resources to the achievement of equal opportunities and educational results by the poorest sectors of society. They also have the obligation to supply schools with sufficient resources, including school textbooks and books, to guarantee a quality education.

The purchase of school textbooks in the country has gone through several stages and initiatives. The most recent one is a program by Cristina Fernandez de Kirchner's administration called "National School Textbook Delivery Program" for public schools. This program provides for the distribution of over 13 million books in the first semester of 2013, purchased from 77 publishers and involved 35 printers, 10 bookbinding workshops, and 30 sewn bookbinding workshops. The investment amounts to 400 million Argentinean Pesos (close to 60 million dollars)[30]. 59% of the purchase was from domestic companies, 5% to foreign companies, and 35% to transnational groups[31]. These books have been distributed to 8.300 schools from vulnerable sectors in first and second grade of elementary school. On the other hand, it was also expected that secondary schools would receive literature collections.

The influence of these government purchases on the publishing industry is evident[32]. Since 2003 the government has bought and distributed 54 million books, increasing the number of participating publishers from 20 to 42 in a single year. In fact, since 2002, the *Book Business Defense Act* created a special legal classification for purchases by the Ministry of Education and the National Public Library Commission, resulting in discounts of up to 50%. This legislation goes further still, prevent-

ing subsequent sales of those volumes purchased at a discount.

In consequence, the existing policy in Argentina focuses on purchasing educational materials based on the traditional understanding on how intellectual works circulate, and fails to reflect more deeply on the process of developing and procuring educational resources in the age of digital technology, the role of OER, or the possibility of negotiating open licenses with publishers.

2. Education and ICTs

The administration of president Fernandez de Kirchner has made a commitment to using information and communication technologies as tools to strengthen the Argentinian educational system. The administration's flagship program, known as "*Conectar Igualdad*" (Connecting equality), was in effect between 2010 and 2013. The central goal of this program is to reduce the country's digital divide[33]. To achieve this, a little over three and a half million laptops have been given to students and teachers from secondary school, special education, and teacher training throughout the country, and servers and networks have been installed in every school[34]. Other actions comprising this program include teacher training in the use of these tools in the educational process, the development of digital contents and technical support to participating schools. Funding was secured through the Fund for the Guaranteed Sustainability of the National Social Security Administration.

This policy is framed within what is known as 1:1 model, or one laptop per child. It is worth highlighting the fact that the program contemplates the use of these laptops at home as well as in school. These laptops are loaned to the student during the school session, and become the students' property upon graduation. In order to create internal networks at schools and to facilitate wireless connectivity, either data centers or network servers have been installed in every participating institution. The Ministry of Federal Planning and Public Investment provide broadband connections through the programs known as "Internet for Educational Establishments" and "Argentina Connect-

29. UNESCO & Prelac, op. cit. (note 9), pp. 37-38. .

30. Halfon-Laksman, F. (2013, March 4). Millonaria inversión en libros escolares. *Tiempo Argentino*. Available at http://tiempo.infonews.com/2013/03/04/sociedad-97590-millonaria-inversion-en-libros-escolares.php.

31. Ministerio de Educación (2013, April 18). Cristina Fernández y Sileoni anunciaron el Operativo Nacional de Entrega de Textos Escolares y obras en Escuelas Técnicas. *Gacetillas y Comunicados*. Available at http://portal.educacion.gov.ar/prensa/gacetillas-y-comunicados/cristina-fernandez-y-sileoni-anunciaron-el-operativo-nacional-de-entrega-de-textos-escolares-y-obras-en-escuelas-tecnicas/.

32. Halfon-Laksman, *op. cit.* (note 30).

33. See "*Conectar Igualdad*" website. Available at http://www.conectarigualdad.gob.ar.

34. Article 1, Decree 459 of 2010.

ed," as well as through public bidding rounds[35]. A noteworthy feature of "Internet for Educational Establishments" is the program's funding mechanism. The program is supported by the Universal Service Fiduciary Fund, to which all telecommunications companies contribute 1% of the revenue earned from the provision of such services[36].

As for the digital contents developed as part of the program, we may find materials ranging from literary collections, historical document libraries, videos and infographics, to geography collections using Google Maps, games, language learning resources, among others[37]. The educational community has free access to these contents through the "Educ.ar" educational portal[38]. Many public and nonprofit institutions have donated materials and rights for the creation of digital contents[39].

Likewise, the "*Conectar Igualdad*" program includes a content development component for students and teachers by means of the following resources: "Connecting Equality 2.0," "Connected Histories," "Test with One Click," and "Connected and Equal."[40] It is worth pointing out that, according to the terms and conditions for teachers, participants waive any ownership over materials that may be produced during their tenure[41].

If we look at the "*Conectar Igualdad*" program from the standpoint of the Paris Declaration principles, it becomes clear that its educational contents contravene the very goal of the OER movement. In this regard, it is important to stress that the terms and conditions found in the "*Educ.ar*" portal, the repository of digital contents for the program, prevent users from reproducing, copying, distributing, transforming or modifying contents without prior written permission[42]. One exception is the contents developed as part of the multiplatform

digital educational contents known as "*Cuenta Regresiva*" (Countdown), designed for 13 to 17 year old students. This multiplatform gathers a variety of digital resources related to course contents, addressing several subjects organized by cycle[43]. According to the terms and conditions for "*Cuenta Regresiva*," both students and faculty are allowed to reproduce and copy contents, as well as transforming and modifying them solely as a result of educational activities derived from their work with the platform[44]. These conditions do not apply to other users, who would require written authorization and of a use and exploitation license for the intellectual property rights of "*Cuenta Regresiva*" or of any third party.

There is no question that this government policy, despite exhibiting a few hints at trying to abide by the Paris Declaration, remains far from achieving its objectives.

B. Chile

According to the Chilean Constitution (article 19), the State must fund a free system that insures access to elementary and secondary school for the entire population. Article 4 of the Chilean General Education Act (GEACI, Act 20.370 of 2009) charges the State with the duty to provide free education at its own educational institutions, but also develops principles for a mixed model of education, including:

> *[...] one owned and managed by the state or its organs, and another, private one, either subsidized or paid, that provides parents and guardians with the freedom to*

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35. Ministerio de Educación (2011). *Nuevas voces, nuevos escenarios: estudios evaluativos sobre el Programa Conectar Igualdad*, p. 18. Available at http://repositorio.educacion.gov.ar:8080/dspace/bitstream/item/96909/Investigacion%20PCI.pdf?sequence.=1.

36. *Ibidem*

37. *Ibidem*, p. 23

38. See "*Educ.ar*" website at www.educ.ar.

39. Some of these institutions are: The Casa Rosada, the National Museum of the Cabildo and the May Revolution, The Historic Independence House, The Church and Convent of Saint Francis in Santa Fe, the Jesuit Block of Cordoba, the National Fine Arts Museum, the Rosario Museum of Contemporary Arts, the La Plata Museum of Natural Sciences, the British Council, and the National General Archives. Ministerio de Educación, *op. cit.* (note 35), p. 24

40. For more information see Grebnicoff, D. (2011). *Estrategia político pedagógico y marco normativo del Programa Conectar Igualdad*. Argentina: Ministerio de Educación de la Nación. Available at http://bibliotecadigital.educ.ar/uploads/contents/estrategia0.pdf.

41. See the document "*Bases y condiciones*" for "*Conectar Igualdad*" at http://concursos.educ.ar/wp-content/uploads/2012/04/Bases_y_Condiciones1.pdf. .

42. See the "Privacy and Terms of Use" section at the "*Educ.ar*" educational portal at http://portal.educ.gov.ar/acercade/condiciones.php.

43 See the document "*Secuencia de actividades para trabajar con Cuenta Regresiva*" at http://www.cuentaregresiva.educ.ar/wp-content/uploads/2011/09/docentes.pdf.

44. See the "Terms of Use" section of "*Cuenta Regresiva*" at http://www.cuentaregresiva.educ.ar/condicionesuso..

choose the educational establishment for their children[45].

According to the former, the State contributes resources to the public or subsidized system. The latter is regulated by a myriad of legal instruments, which is symptomatic —as observed by the former United Nations Special Rapporteur on the right to education, Vernor Muñoz— of a complicated school system, both in its institutions and in its operations[46]. The Chilean subsidy system seems to protect freedom of teaching and private initiative for the creation of schools, above the guarantee to the right to education. On the other hand, Muñoz comments that the system reduces the State to a position of being a mere service provider. This stems from the fact that educational management is placed in the hands of private institutions, which fosters segmentation, exclusion, discrimination and the widespread use of selective mechanisms[47].

In Chile, the proportion of private investment in education is significant and appears to be increasing. According to the OECD study entitled *Education at Glance 2011* Chile has one of the lowest levels of direct public spending in education. This report points out that the percentage of GDP devoted to elementary and secondary education equals 4.2%. Nonetheless, close to one fourth of the system is privately funded. Figures in this report estimate that for every 100 dollars spent on educational institutions (excluding higher education) in Chile, 22 come from private sources and the remaining 78 come from direct spending, subsidies and transfers. In contrast, the average rate of private investment in education is only 8 of every 100 dollars[48].

This program will certainly represent an additional challenge for the Chilean government as part of any future State policy for the adoption of open educational resources. This matter would then need to be evaluated and addressed.

1. School Textbooks and Books

Chilean government policy regarding access to school textbooks is based on the recognition that such resource is vital for the learning process. For this reason, the delivery of these textbooks has expanded to additional grades, as well as to more subject areas, from first to tenth grade in subjects such as Math, Science, English, Biology, Physics and Chemistry, among others. On the other hand, the Ministry of Education acknowledges the central function of the school textbook in the educational efforts by teachers and in every area of learning. Their value is also recognized as tools for cultural enrichment and equality for all families, most significantly for those sectors with the greatest socio-economic vulnerability. Thus, since the 1990s, textbook distribution programs have been promoted throughout the country, aimed at improving the quality of education.

The Ministry of Education manages the Chilean public textbook market centrally and is its main buyer. This market represents 50% of the Chilean publishing industry[49]. Currently, the textbook procurement process is managed through the School Textbook Program at the Curriculum and Evaluation Unit of the Ministry of Education, in collaboration with other entities, such as the Procurement and Logistics Unit, and the Contracting Unit, at the General Administrative Department. These offices are in charge of designing and implementing the procurement, assessment, accreditation, eligibility and follow-up procedures for the use of school textbooks[50]. This process seeks to purchase educational materials from the available offers from publishers as presented in a public bidding process that is "objective, equitable, transparent and effective."[51] To achieve this objective, an open purchasing procedure is employed, which operates through the bidding platform at the Public Contracting and Procurement Directorate — *ChileCompra*[52].

45. According to article 22 of the Chilean General Education Act, an educational modality is any organizational and curricular option that "for regular education, within one or more educational grades, seeks to address specific learning requirements, personal or contextual, with the goal of guaranteeing equal guarantee for the right to education." Some of these modalities are special or differentiated education aimed at addressing special educational needs of students, permanent or temporary, due to a specific learning deficiency or difficulty, as well as adult learning.

46. Muñoz, V. (2011). *El derecho a la educación: una mirada legislativa comparada. Argentina, Uruguay, Finlandia y Chile*. Santiago, Chile: Oficina Regional de Educación para América Latina y el Caribe de la UNESCO, p. 45. Available at http://portal.UNESCO.org/geography/en/files/15017/13548014291Estudio-comparativo-UNESCO-vernor-munoz-espanol.pdf/Estudio-comparativo-UNESCO-vernor-munoz-espanol.pdf.

47. Muñoz points out that, according to official figures, subsidies to private institutions went from 32% in 1990 to 52% in 2001, whereas subsidies to local institutions went from 58% to 39% in the same period. *Ibidem*.

48. OECD (2011). *Education at Glance 2011. OECD Indicators: Country Note — Chile*, p. 2. Available at http://movilizatechile.files.wordpress.com/2011/10/oecd-48657324-chile.pdf.

49. Ministerio de Educación (2009). *Política de textos escolares*. Santiago, Chile, Unidad de Currículum y Evaluación. Available at http://portal.textosescolares.cl/imagen/File/biblioteca/Folleto_Politica_2.pdf.

50. *Ibidem*, p. 15.

51. *Ibidem*, p. 17.

52. See "*Mercado Público*" website at http://www.mercadopublico.cl.

The complete procurement process takes between 22 and 24 months, concluding when students and teachers in every subsidized educational institution in the country receive the textbooks and teaching aids free of charge, including a writing workbook for first and second grade students in language and communication, and audio CDs in English, hypertexts (multimedia resources linked to the text) for middle and high-school students. In accordance with the former, public procurement of school textbooks takes almost two years, including the stages of drafting technical requirements, and evaluating the bids and eligibility of textbook suppliers. The Chilean Ministry of Education reported that 38% of textbooks were purchased from Chilean publishers. Chart 6 shows publishers that have participated in State procurement in 2008.

Chart 7 shows the countries of origin of these publishers: Chile, Spain, Colombia, England and United States; as can be seen, participation by foreign publishers is quite significant.

According to this report, 85% of the resources budgeted for the aforementioned procurement process was designed to the purchase of school textbooks, 8% to their distribution and 7% to administrative expenses. Of the 18.947.755 units purchased by the Ministry of Education in 2012, 70% corresponds to re-printings of materials acquired through public bids, whereas the remaining percentage was destined to new purchases through the "Public Market" portal. The Logistics Coordination Unit is in charge of receiving and distributing the purchased textbooks. In 2012, it delivered 18.234.293 units nationwide (equal to 96% of the purchase), out of which 6.561.402 textbooks were delivered in the metropolitan area (36% of books), benefitting 2.616 educational establishments[53].

As is the case in Argentina, the process focuses on the purchase of consumer goods, without proposing the reuse of educational materials, and in consequence, the public budget is basically allocated to the reprinting of educational materials. This expense could be significantly reduced if invested in the development of OER, as in fact has been done elsewhere. For example, the 2011 initiative in the U.S. State of Washington, where the decision was made to liberate, through a Creative Commons Attribution license, educational materials from the 81 most requested courses in its higher education institutions (the process would proceed between 2011 and 2013), has led not only to a shift in the learning model from one of consumption to one where engagement and reuse of the materials is made possible, but also entailed substantial savings for the state[54]. This decision meant that courses produced with public funds are distributed online, and printed materials sold to students at printing cost (e.g. a Calculus text can be purchased for around 20 dollars). In April 2013, a published study analized the project outcomes and concluded that, up until then, savings for students had amounted 5.5 million dollars[55].

2. Education and ICTs

In 1992, the Ministry of Education created the program called "*Enlaces*" (Links), whose objective has been to incorporate information and communications technologies to education and to build a national network of all subsidized schools in the country. Thus, the Chilean government expected to contribute to improve the quality and equity of education in the country[56]. This program has evolved into an integrated platform that covers equipment and infrastructure for connectivity as well as the development of digital contents and continuous teacher training.

The program includes the following five initiatives[57]. First, the delivery of digital educational materials (in CD format) between 1998 and 2000 to participating schools. Second, free Internet access provided to educational institutions. This initiative was made possible through a public-private partnership with *Telefónica CTC Chile*. The third initiative launched the "*Educarchile*" educational portal, geared towards all stakeholders in the educational process (students, relatives, teachers and school administrators)[58]. This portal contains 25 thousand digital educational resources (e.g. articles, videos, and infographics) classified by

53. Contraloría General de la República de Chile (2013). *Informe final No. 129 of 2012, sobre auditoría al programa recursos educativos — textos escolares,* p. 2. Available at http://www.contraloria.cl/basesdocumentales/bifaPortalCGR.nsf/90F04B99B0EFEC4284257AE900689361/$File/INFORME%20FINAL%20129-2012%20SUBSECRETAR%C3%8DA%20DE%20EDUCACI%C3%93N%20PROGRAMA%20RECURSOS%20EDUCATIVOS,%20TEXTOS%20ESCOLARES%20ENERO%202013.PDF?OpenElement.

54. Creative Commons' OER Policy Registry (2013, June 7). Available at http://creativecommons.org/weblog/entry/30201.

55. Student PIRGs (2013). *Affordable Textbooks For Washington Students: An Updated Cost Analysis of the Open Course Library*. Available at http://www.studentpirgs.org/resources/updated-cost-analysis-open-course-library.

56. Enlaces del Ministerio de Educación (2012). *Enlaces, innovación y calidad en la era digital. 20 años impulsando el uso de las TIC en la educación*. Chile, p. 60. Available at http://www.enlaces.cl/tp_enlaces/portales/tpe76eb4809f44/uploadImg/File/PDF/publicaciones/mem2013_baja.pdf.

57. See "*Nuestra Historia*" section on the "*Enlaces*" program website at http://www.enlaces.cl/index.php?t=44yi=2ycc=179ytm=2.

58. See "*Educarchile*" educational portal at www.educarchile.cl

Graph 6. Participation by Publishers in Purchasing Processes, 2008.

Source: Ministerio de Educación (2009). PowerPoint Presentation on 'Textos Escolares: un mercado amplio, estable y transparente.'
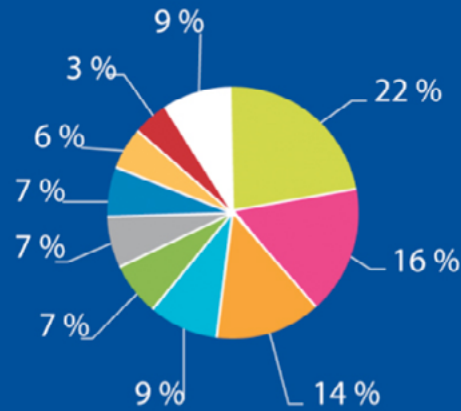
Graph 7. Participation by Publishers in the Purchasing Process by Country of Origin, 2008.

Source: Ministerio de Educación (2009). PowerPoint Presentation on 'Textos Escolares: un mercado amplio, estable y transparente.'

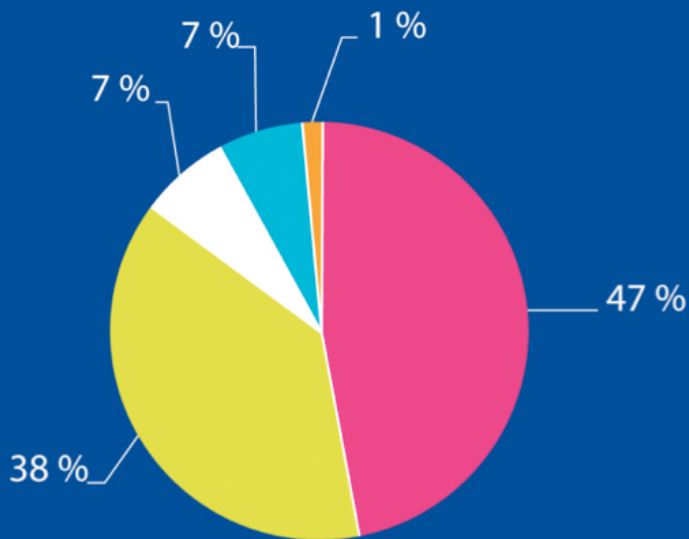subject, and is accessed by over 700 thousand subscribers[59]. Although the portal allows users to upload educational contents, it bans them from "reproducing, copying, distributing, transforming, modifying, making available, renting or communicating the contents to the public," without prior authorization by copyright holders[60]. As we saw in the Argentinian case, this policy clearly diverges from the Paris Declaration.

The fourth initiative, "Technology Plan for a Quality Education," including projects such as "Mobile Computer Labs" (MCL), has distributed one laptop per student in the classroom and one per teacher. Despite integrating the 1:1 model, it has some unique characteristics, as it involves carts (computers on wheels) that make laptops available to students for a period of time, and are shared between several grades[61]. The MCL project is not focused on closing the digital divide but rather on addressing learning difficulties in language and math (e.g. reading, writing, and basic arithmetic) through the use of ICTs, initially among third grade students[62]. To do this, the project encompasses the provision of equipment and connectivity, the production of resources, the training of teachers, and the design of learning strategies.

The fifth initiative is another digital platform created as part of the "*Enlaces*" program in the "*YoEstudio*" (I study) portal. Through the use of digital resources such as videos, simulators, etc., the portal seeks to support student learning by reinforcing and complementing lessons from each of the units in their academic coursework. Part of the material available was provided for free by institutions and individuals. One may also find resources developed by the Ministry or purchased from various companies, and provided free of charge to students[63].

Once again, we find a scheme that acknowledges the need to integrate ICTs into teaching and learning, but has not fully adapted to the concept of OER. The basic structure, however, does seem to be in place. A better assessment of the possibilities unlocked by OER could prove useful in

the design of future public policies that take this perspective into account.

C. Colombia

By constitutional mandate, as well as from jurisprudence, education in Colombia is mandatory between the ages of 5 and 18, comprising one year of preschool and nine years of elementary and secondary education. The Colombian General Education Act (GEACo; Act 115 of February 8, 1994) is the statute that provides the general rules that govern public education services in the country. The responsibility to manage the state education service is decentralized and rests upon the nation and subnational bodies (e.g. departments and certified municipalities) under the terms stipulated by the Political Constitution and other laws.

In turn, public education is funded with taxpayer resources, as distributed by way of transfers to departments and districts; other national public resources provided by law (e.g. royalties or payments by oil companies), as well as contributions from departments, districts and municipalities as determined by law. According to article 173 of the GEACo, financial resources for education must cover operational and administrative expenses of the public education system, and shall increase annually in order to serve the system adequately.

In 2012, education spending of national and subnational resources reached 31 billion Colombian pesos (close to 16 million dollars), equivalent to 4.8% of GDP[64]. According to the Colombian Ministry of National Education (MoNECo):

> *In the period between 2007 and 2012, public education spending grew at an average rate of 11.5%, which places the education sector among the top recipients of public social spending[65].*

The total budget of the Ministry of National Education presented to Congress for 2013 was 24.8 billion Colombian pesos (about 13 million dollars), which represented a 7.7% increase with re-

59. Enlaces del Ministerio de Educación, *op. cit.* (note 56), p. 64.

60. See "Terms and Conditions" section at "*Educarchile*" website. Available at http://www.educarchile.cl/Portal.herramientas/term_y_cond/terminos.asp?GUID=6ae58584-70a9-4475-8d06-16d4772d5182.

61. Enlaces del Ministerio de Educación, *op. cit.* (note 56), p. 64.

62. Red Latinoamericana de Portales Educativos (2011). Experiencias 1 a 1 en América Latina. Seminario Internacional. *Serie Seminarios*, p. 18. Available at http://www.relpe.org/wp-content/uploads/2011/12/RELPE-Modelos-1-a-1.pdf.

63. Enlaces del Ministerio de Educación (2011). *Nuevo portal de Enlaces ayudará a reforzar los contenidos educativos.* Available at http://www.enlaces.cl/index.php?t=44yi=2ycc=904.218ytm=3.

64   Ministerio de Educación (n.d.). *Rendición de cuentas Diciembre 2011 — Septiembre 2012*, p. 84. Available at http://www.mineducacion.gov.co/1621/articles-194741_archivo_pdf_informe_octubre19.pdf.

65. *Idem.*

spect to the 2012 budget[66]. Of this figure, 94.3% corresponds to operational expenses, and the remainder corresponds to investment expenses.

As seen in Chart 8, over the past 7 years the increased investment budget for MoNECo has been maintained, with a notable exception of the reduction experienced in 2011.

Despite a considerable increase in Colombia's education budget, the Ministry of National Education does not have accumulated figures for the budget line devoted to the procurement and development of educational resources by national or subnational education authorities.

1. School Textbooks and Books

The country does not have a national policy that sets the foundation for developing and procuring educational resources. The Ministry also lacks statistics on investment in schoolbooks and textbooks purchased with taxpayer resources, given that subnational governments make most purchases. On the other hand, changes in procurement and purchases of school textbooks are at the mercy of the preferences of succeeding administrations. Any information found about Colombia's spending in educational resources was thanks to the analysis of concrete initiatives conducted by governments.

Production of educational materials occurs as part of certain programs within the MoNECo. One example is the "*Todos a Aprender* (Let's All Learn) program, implemented since 2010, and whose objective is to improve learning conditions in selected educational establishments, previously identified as the most troubled and most distant from administrative centers[67]. Upon the writing of this report, the Ministry had distributed a total of 9 million textbooks to "4.327 educational establishments, exceeding the initial goal of covering 3.000 schools."[68] This program involves the purchase and distribution of educational materials (e.g. textbooks in language and math for primary school students, and activity books and guides

for teachers) with a total budget of a little over 3.2 billion pesos (close to 1.7 million dollars)[69]. For the purchase of these materials, the Ministry of National Education set into motion an inverse auction process, hoping to reduce the historically high costs imposed by the country's publishing sector[70].

For the public bid launched by the Ministry, a standards-based competition and selection criteria ranging from 0-5 were set. Publishers were then asked to present their technical and financial proposals. The bidders in this auction were *Educar Editores* (Colombia), *Unión Temporal Men 53-2012* (Colombia), *Unión Temporal Material Educativo Men* 2012 (Colombia), *Unión Temporal Ediciones SM II* (Originally from Spain and winner of the bid) and *Unión Temporal Panamericana Textos* 2012 (Colombia). The result of adopting this inverse auction procedure allowed the Ministry of National Education to acquire a total of 900 thousand school textbooks, exceeding the proposed goal of 470 thousand textbooks[71]. The distribution to recipient institutions was in charge of the Ministry. It is worth pointing out that the winning publisher kept all the copyrights for the textbooks produced. The results of this investment will not be available until 2014, when the program shall be assessed.

In the 1960s, on the contrary, the Colombian Government adopted an educational model known as the "*Escuela Nueva*" (New School) program, aimed at making education universal in rural areas. The program sought to allow access and retention of boys and girls, as well as improving the quality of learning at rural schools through a model that allowed learners to work autonomously[72]. Within this program, the development and production of educational materials varies greatly. Rural institutions working with the program require "especially designed workbooks for each grade in primary school, materials for teachers and books for school libraries.[73]" In this case, the Ministry put together teams of authors, ministry officials and contractors in order to produce contents for the

66. *Ibidem* p. 89.

67. See "*Todos a Aprender*" website at http://www.mineducacion.gov.co/1621/w3-propertyvalue-48336.html.

68. Ministerio de Educación Nacional (2013). "Todos a Aprender adjudica producción de 900 mil textos de primaria que llegarán a 500 establecimientos educativos". *Centro Virtual de Noticias de la Educación*. Available at http://www.mineducacion.gov.co/cvn/1665/w3-article-316760.html.

69. For more information see the Request for Proposals by the Colombian Ministry of National Education. Available at http://www.mineducacion.gov.co/1621/articles-314174_archivo_pdf_SA_MEN_53_2012.pdf.

70. The inverse auction is a common method by which governments purchase goods that are equivalent. However, in the case in question, this method is questionable given the difficulty in determining the equivalence of two books. Nonetheless, the current administration chose this public contracting modality in order to reduce procurement costs for textbooks.

71. Ministerio de Educación Nacional, *op. cit.* (note 67).

72. Villar, Rodrigo (n.d.). "El programa Escuela Nueva en Colombia", *Revista Educación y Pedagogía*, 14 - 15. Available at http://aprendeenlinea.udea.edu.co/revistas/index.php/revistaeyp/article/viewFile/5596/5018.

73. Uribe, *op. cit.* (note 27), p. 28.
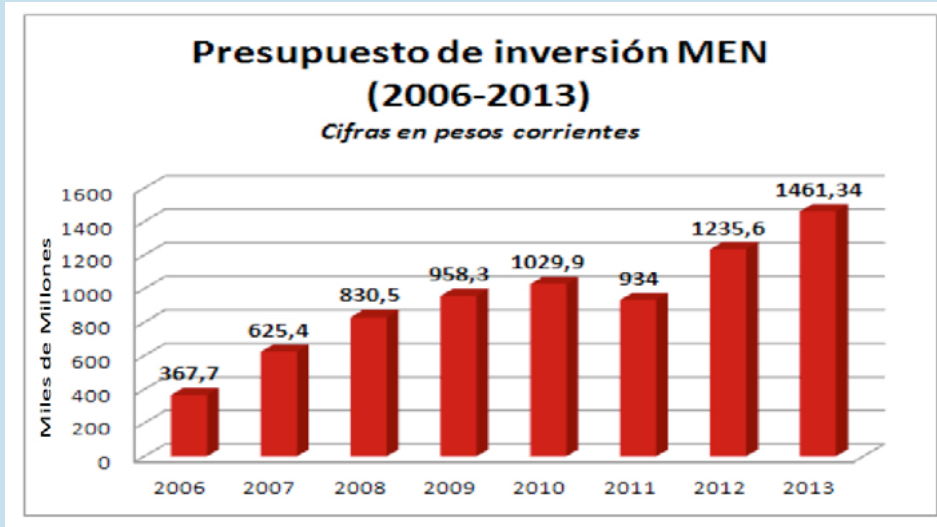
Graph 8. MoNECo Investment Budget, 2006-2013.
(Amounts in Current Pesos).

Source: Ministerio de Educación (n.d.). *Rendición de cuentas Diciembre 2011-Septiembre 2012*. Colombia, p. 91.

modules and school textbooks. Instead, to print and distribute the textbooks, as well as to purchase the library books, the Ministry of National Education opened public bids. Despite the fact that the Government produces all contents with public funding, the Ministry retains all copyrights on the textbooks distributed as part of the program.

On the other hand, it is interesting to note that in Colombia's book market, statistics show that government purchases of school textbooks are also prevalent. The tables 1, 2 and 3 show the preeminence of domestic vs. foreign publishers with respect to a constantly growing demand for didactic materials[74].

Yet, the presence of foreign publishers, particularly from Spain and the USA, cannot be underestimated[75]. It is safe to assume that their influence extends strongly into the educational sector.

The MoNECo, by not producing contents, depends on the school publishing sector to supply the education system with the necessary educational resources. This, on the other hand, entails that the publishing sector has broad control over market prices. Precisely in order to counteract high prices, the Ministry has tested formulas in recent years that can produce savings (e.g. inverse auction). Despite this, the Colombian government does not seem interested in redesigning the current school textbook production scheme, nor in studying the possibility of developing OER to maximize this investment.

2. Education and ICTs

Colombia has a program to promote universal Internet access, established as part of the MoNECo education and ICT's strategy since early 2000. During the period between 2002 and 2010, the "National Media and ICTs Program" was implemented. After this point, the current administration's flagship program in this regard is known as the "National System for Education Innovation and ICTs."

This plan fosters pedagogical transformations centered on ICTs, based on the following objectives: promoting access to technology infrastructure; fostering the use and appropriation of ICTs into pedagogical processes; encouraging content production and management; stimulating research into education and ICTs; and developing teacher capacities and competencies in the educational use of ICTs[76]. In addition, the program seeks to strengthen partnerships between the Ministry of National Education and other ministries, such as the Ministry of Information and Communication Technologies, educational establishments, education authorities, higher education institutions, and private sector institutions[77].

74. Cámara Colombiana del Libro (2011). *Estadísticas del libro en Colombia. Año 2011*. Colombia, pp. 10 y 20. Available at ftp://ftp.camlibro.com.co/Estadisticas/Presentacion%20Estadisticas%202011.pdf

75. *Ibidem*, p. 39.

76. Ministerio de Educación Nacional (n.d.). *Plan Decenal en Educación 2006-2016, Lineamientos en TIC*. Colombia, pp. 6-7. Available at http://www.plandecenal.edu.co/html/1726/articles-166057_TICS.pdf.

The aforementioned objectives have been broken down into a series of goals and strategies. Initially, professional development for teachers in the pedagogical use of ICTs is to be part of the program "Digital Teacher." The goals include the certification of 50% of teachers, the training of 8% of the faculty and administrators in the pedagogical use of ICTs, and the training of 15 teachers in content creation.

Secondly, digital educational content management pursues the consolidation of quality educational contents, publicly accessible, available on the Internet, television, and radio. In this context, the *National Digital Open Educational Resources Strategy* establishes an action framework, and the "*Colombia Aprende*" (Colombia Learns) educational portal serves as repository for the contents developed under the program. This is a noteworthy effort to allow for public access to these contents; nonetheless, and despite these efforts, this initiative falls short of the OER standard, as the use of these contents would not necessarily be subject to open licensing.

On the other hand, the plan promotes research into educational innovation through the use of ICTs, and by strengthening research groups and accelerating the development of research projects on the use of ICTs for educational innovation. The financial resources available for the promotion of research projects come from the Ministry of National Education and *Colciencias* (the Colombian Science, Technology and Innovation Administra-

tive Department), and are subsequently distributed after a public bidding process.

Third, it is necessary to accelerate access to technology infrastructure. To this end, Colombia has chosen to equip educational institutions with hardware and connectivity, with a goal of reaching 14 children per computer[78]. The Ministry of National Education has thus discarded the 1:1 model, according to sources within the Ministry, due to the inconsistent results available from other countries. Notwithstanding, the Ministry of ICTs, through its program "*Computadores para Educar*" (Computers for Education), has been in charge of delivering new or refurbished computers and tablets to primary school students. The goal is to contribute to "close the digital and knowledge divide through access, use, and enjoyment" of ICTs[79]. Paradoxically, in the past few months, the Ministry has focused on providing technology infrastructure by offering tablets en masse to students[80]. This action has been strongly criticized, since it does not coincide with the MoNECo skepticism with regards to the 1:1 model. Moreover, if there was criticism about the delivery of computers/tablets without the proper support, the problem is compounded by the tablet deliveries, as they do not appear to be associated to any specific pedagogical program, nor with any support for students and teachers, in addition to a general lack of educational content apt for this type of device.

The private company *Compartel*, through the Ministry of ICTs, provides the connectivity for schools. This means that the existence or lack of an Internet

Chart 1. Book Sales.

Sales of Copies	2008	2009	2010	2011
Country edition sales to domestic market	19.155.048	20.201.450	19.343.157	18.035.269
Imported copies sold to domestic market	5.119.543	5.259.109	4.610.767	4.595.278
Total copies sold to domestic market	24.274.591	25.460.559	23.953.924	22.630.547
National copies sold to foreign market	10.039.925	9.634.142	9.520.555	8.442.771
Total copies sold	34.314.516	35.094.701	33.474.479	31.073.318

Source: Cámara Colombiana del Libro (2011). *Encuesta del Libro en Colombia 2011*. Colombia, p. 10.

77. Ministerio de Educación Nacional, *op. cit.* (note 64), p. 59.

78. Ministerio de Educación Nacional, *op. cit.* (note 76), p. 60.

79. See "*Computadores para educar*" program website at http://www.computadoresparaeducar.gov.co.

80. For more information, see press releases from the Ministry of ICTs about the delivery of computers and tablets at http://www.mintic.gov.co/index.php/prensa/entrega-computadores-tablets.
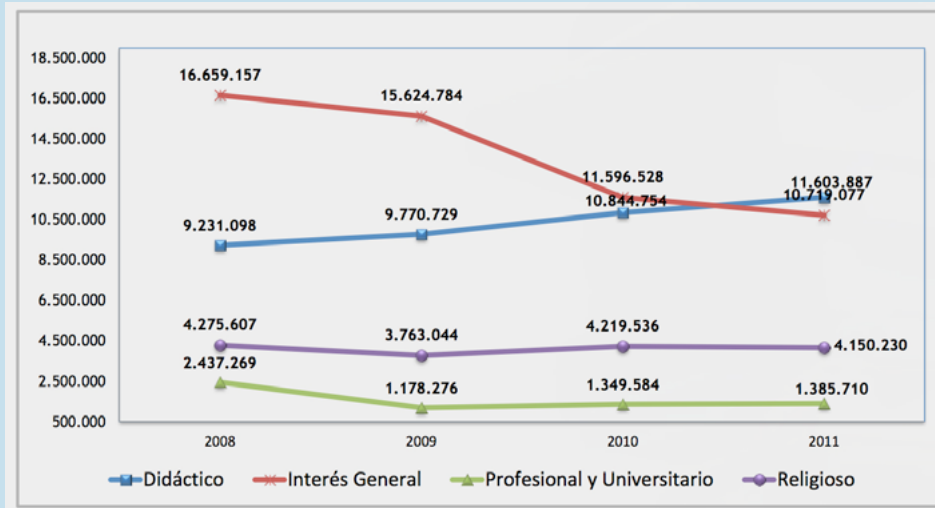
Chart 2. Total Book Production by Sub-sector.

Source: Cámara Colombiana del Libro (2011). *Encuesta del Libro en Colombia 2011.* Colombia, p. 20.

Chart 3. Imports by Publisher's Country of Origin.

No.	Country of Origin	Total	%	No.	Country of Origin	Total	%
1	Spain	19.228.199	25,2	15	Uruguay	690.033	0,9
2	United States	15.724.251	20,6	16	Hong Kong	653.806	0,9
3	Mexico	8.907.896	11,7	17	Singaporer	494.156	0,6
4	China	7.129.697	9,4	18	Germany	382.365	0,5
5	Chile	5.590.453	7,3	19	Ecuador	382.263	0,5
6	Peru	3.024.936	4,0	20	Poland	217.286	0,3
7	United Kingdom	2.538.098	3,3	21	Thailand	168.509	0,2
8	Argentina	2.316.736	3,0	22	Cyprus	129.407	0,2
9	Brazil	1.958.318	2,6	23	Indonesia	120.799	0,2
10	Greece	1.220.233	1,6	24	Korea, Republic of	115.150	0,2
11	Panama	1.160.009	1,5	25	Puerto Rico	112.694	0,1
12	Italy	1.036.372	1,4	26	Ireland	111.826	0,1
13	France	1.033.581	1,4	27	Austria	104.935	0,1
14	Costa Rica	865.272	1,1	28	Other	755.675	1,0
Totales						76.172.956	100,0

Source: Cámara Colombiana del Libro (2011). *Encuesta del Libro en Colombia 2011.* Colombia, p. 39.

connection is out of the hands of the Ministry of National Education, even though the consequences of a privation of connectivity and of the quality of such connection have direct repercussions on the programs conducted by the Ministry. On the other hand, connectivity for educational institutions depends on government contracts, which has the drawback of lacking guaranteed continuity after these contracts have expired. Notwithstanding, this strategy has resulted in substantial improvements to school connectivity. By 2012, between

84% and 86% of all educational institutions had an Internet connection[81]. This percentage has clear regional variations. For example, there are municipalities where 100% of students can access the Internet from their school. However, there are still regional disparities that mirror the country's historic trend of social inequality.

The Ministry of National Education of Colombia has planned for the creation of Centers for Educational Innovation as part of its strategy for improv-

ing the technological infrastructure and capacities among the education sector. There are plans for 6 centers —one at the national level, and five regional centers working in partnership with universities, subnational governments, and the private sector. These centers will aim at raising awareness about the standards and policies for the use of ICTs, as well as training teachers, and conducting educational innovation research and producing digital educational contents[82]. Funding for this project comes from a 30 million dollar loan provided by South Korea[83].

In regards to technology transfer, other projects are being implemented through public-private partnerships, either through official development aid or by way of credits[84].

Improvements to ICTs access in Colombia are quite evident. Nonetheless, and despite great efforts, their use remains limited and reduced to traditional education models, lacking innovations in pedagogy and learning[85].

Finally, we must highlight an initiative that Colombia has pioneered in Latin America, known as the *National Open Digital Educational Resources Strategy*, aimed specifically at higher education. Launched in 2012, this strategy is perhaps, out of the 5 countries studied, the one that comes closest to achieving the purposes of the Paris OER Declaration. Its objectives are as follows:

> *[...] help improve the conditions for educational communities to access information and knowledge, strengthen the capacity for educational uses of ICTs, foster a culture of collaboration and cooperation to promote the exchange, reuse, adaptation, combination, and redistribution of educational resources, and consolidating a broad supply of public access resources [...]*[86]

One of the great virtues of this strategy is its commitment to open access, although it is not free from shortcomings. One such example can be found in the "*Colombia Aprende*" portal —a platform that will be extensively employed for this strategy— which, despite the myriad of contents, tools and services it provides to the educational community, has conditions of use that ban the "reproduction, copy, distribution, transformation or modification of contents without prior authorization" from copyright holders. This clearly fails to meet the criteria for OER[87].

D. Paraguay

Paraguay's legislation provides for free and mandatory education. In 2010, the legislature took a step toward safeguarding education by extending free education to secondary school[88]. This measure was approved with the caveat that it shall be progressively applied until it covers tuition fees as well as a basic set of school supplies.

Another constitutional obligation in the country is to devote 20% of the National General Budget (NGBPy) to education[89]. We must point out that, since the educational reform initiated in the 1990s, investment in education has experienced a 63% growth in constant values. Notwithstanding, as stated by the Ministry of Education and Culture of Paraguay (MoECPy), such increase has not been sufficient to address educational priorities[90]. In this regard, it is worth noting that the MoECPy states that

> *[...] by comparison to other Latin American countries, Paraguay falls under the median in terms of percentage of GDP allocated to education, with 4.3%; however, it still falls above some MERCOSUR countries*[91].

81. Information gathered from an interview with a MoNECo official in May 2013.

82. Ministerio de Educación Nacional, *op. cit.* (note 76), p. 61.

83. *Ibidem*, p. 94.

84. Some of these projects are "*Innovación para dotación de aulas de cómputo móviles*," "*Computadores para la paz*," "*Aula del futuro*," "*Aprendizaje móvil*" and "*Proyecto de alianzas de contenidos.*"

85. Ospina Mejía, O. (2012). TIC en educación: más allá de su integración en el currículo *Colombia Digital*. Available at http://www.colombiadigital.net/entorno-tic/especial-del-mes/especial-marzo/item/1467-tic-en-educaci%C3%B3n-m%C3%A1s-all%C3%A1-de-su-integraci%C3%B3n-en-el-curr%C3%ADculo.html.

86. Ministerio de Educación Nacional (2012). *Recursos Educativos Digitales Abiertos*. Bogotá, Colombia: Graficando Servicios Digitales, p. 19. Available at http://www.colombiaaprende.edu.co/reda/REDA2012.pdf

87. Also see "Terms of Use" section at "*Colombia Aprende*" educational portal at http://www.colombiaaprende.edu.co/html/home/1592/w3-article-312088.html.

88. Act 4.088 of 2010.

89. Article 85 of the Political Constitution of Paraguay.

90. Ministerio de Educación y Cultura (2011). *Plan Nacional de Educación 2024*. Paraguay, pp. 57-58. Available at http://www.mec.gov.py/cms/adjuntos/2344.

The Economic Commission for Latin America and the Caribbean (ECLAC) Social Public Expenditure portal provided other relevant figures[92]. According to this tool, social spending in education as a percentage of GDP was 4.7% in 2010 (the most recent figure). Of this percentage, 90% corresponds to operating expenses, such as salaries, oscillating between 85% and 95%[93].

The MoECPy and the National Education and Culture Council have established, as one of the objectives in their Updated 2020 Education Strategy to "increase investment in education in its condition as a public good[94]." Among the actions proposed to reach this goal, we find: (1) increasing the education budget with respect to the NGBPy and GDP, (2) identifying and capturing new sources of internal and external funding, and (3) establishing alliances with the private sector[95].

1. School Textbooks and Books

Paraguay is one of the most extreme cases of a lack of available public information. Despite repeated requests to the MoECPy, it was not possible to obtain figures beyond what we present below. This is evidence of the weakness of this study in regard to an analysis of public spending for educational resources in Paraguay.

The information available, in many cases, is limited to specific programs within the national education policy. However, in the *Education Strategic Plan. Paraguay 2020 — Update*, the MoECPy sets out as an action to provide didactic and technology resources in order to improve and expand educational and learning opportunities for learners throughout the country[96].

Perhaps one example that illustrates actions aimed at achieving the aforementioned objective is the "Paraguay Lee" (Paraguay Reads) program, conducted in alliance with the private sector. Some of this plan's activities involve the distribution of batches of books, staring in September 2012, among public and private educational institutions in Asuncion[97]. The goal is to deliver libraries to 363 educational institutions in the capital, thus, facilitating access to textbooks and promoting reading among around 2.500 students in secondary school, and 68.424 in elementary school. Meanwhile, the national objective is to provide 7.500 libraries in order to reach 1.200.000 students[98].

This program also involves the delivery of classroom libraries for elementary and secondary schools, to be consulted by students and faculty alike. It also provides for the establishment of learning resource libraries. These spaces are aimed at facilitating teaching, and would be equipped with technological and bibliographical resources for teachers, students, and the broader community. It is expected that these will be equipped with a series of materials to aid their operation (e.g. computers, laptops, printers, projectors, desks, etc.). Bibliographic materials shall include textbooks in communication, social sciences, natural sciences, math, personal development, and social development. Lastly, the program shall create themed classrooms, or learning spaces, for secondary levels equipped with books and other didactic materials aimed at each area of the secondary school study plan: Social Sciences, Basic Sciences, Language, and Art.

The school textbook environment was transformed after the educational reform of the 1990s. Currently, the State no longer controls the production of an "official reading book." Now the publishing industry handles the textbook market, both for the public and the private education systems[99]. The State purchases school textbooks through public bids, and then distributes them free of charge among public school students. On the other hand, in private education the publishing markets compete to have teachers opt for their books, assessing their contents, authors, sources, consistency

91. *Ibidem*, p. 28

92. See "Gasto Social en América Latina y el Caribe" section at Social Investment in the Region portal at http://dds.cepal.org/gasto/indicadores/ficha/?indicador_id=5.

93. Preal & Instituto de Desarrollo (2013). *Informe de Desarrollo Educativo Paraguay*, p. 26. Available at http://www.desarrollo.edu.py/v2/uploads/2013/05/Informe-de-Progreso-Educativo-PARAGUAY-2013.pdf.

94. Ministerio de Educación y Cultura y Consejo Nacional de Educación y Cultura (2008). *Plan Estratégico de Educación. Paraguay 2020 – Actualizado. Bases para un pacto social*. Paraguay, p. 24. Available at http://planipolis.iiep.unesco.org/upload/Paraguay/Paraguay_plan_estrategico_Paraguay2020.pdf.

95. *Ibidem*.

96. Ministerio de Educación y Cultura, *op. cit.* (note 90), p. 68.

97. Ministerio de Educación y Cultura (2012). *Programa Paraguay Lee entregará libros a instituciones educativas de Asunción*. Available at http://www.mec.gov.py/cms/entradas/292410.

98. *Ibidem*.

99. Amplia oferta de textos escolares para el sector educativo privado (2011, January 9). *ABC Color*. Available at http://www.abc.com.py/edicion-impresa/locales/amplia-oferta-de-textos-escolares-para-el-sector-educativo-privado-205989.html.

with the official program, and considering even the paper quality and overall value. The price disparities between the publisher's offers are striking. According to an article published on January 9, 2011 on the newspaper ABC Color, local publishers can sell books ranging between 25.000 and 90.000 Guaraní (between 5 and 20 dollars), whereas imported books for secondary school can exceed 150.000 Guarani (close to 34 dollars)[100]. This can be a hefty burden for many families.

Although the information analyzed here only provides a small fraction of the full picture, it can be concluded that Paraguay follows a similar trend as the countries mentioned before, relying on a public contracting system at the mercy of the publishing market. The role of the State is limited to establishing criteria in accordance with the school curricula, contracting publishers with public funds to produce educational content, and then distributing them among the institutions that make up the public education system. In turn, publishers maintain control over production of educational materials within a scheme that doubtlessly produces substantial profits.

2. Education and ICTs

Paraguay lags far behind in terms of technological and digital literacy. In its *Education Strategic Plan. Paraguay 2020 — Updated* it is clear what immense challenges await in the future in order to adapt education in Paraguay to new scientific and technological developments[101].

The digital gap in Paraguay is perhaps the greatest barrier for the implementation of an effective public policy for improving and expanding access to ICTs in education. According to figures presented by the Educational Trends in Latin America Information System, students in Paraguay, together with Guatemala and Honduras, have the lowest levels of Internet access at home[102]. Only between 2% and 4% of children have access to the Internet. On the other hand, Internet penetration in these countries is very low, both in rural and urban

areas. Figures from 2000 show that only 5.14% of homes in urban areas has Internet access, whereas a minuscule 0.21% does so in rural areas[103].

On the other hand, as noted by education expert Juan Silva Quiroz, the policies for the use of ICTs in education throughout the region have contemplated mainly their implementation in schools, assuming that the use of ICTs in education will automatically form part of the training for future teachers[104]. Nothing is further from the truth. Nonetheless, this scenario has started to change in countries such as Argentina, Uruguay, and Paraguay. Such trend has been clearly demonstrated by the MoECPy *National Education Plan 2024*:

> The MoEC has reformulated its policy and operations by involving every level of the educational system, from early education to higher education, invariably including universities and administrative bodies at the national and provincial level[105].

In this way, we may conclude that the strategy for incorporating ICTs in Paraguay is presented as a gradual and equitable option, whose main authors are to be the teachers[106].

The MoECPy has carried out a series of actions as part of its ICT implementation strategies. In 2011 it initiated a plan to incorporate new technologies into the country's classrooms. In March of that same year, it delivered the first 33 computers to a school in Ciudad del Este. This plan also integrates a training program for teachers aimed at developing their ICT skills for pedagogical purposes.

Similarly, the Paraguayan Government has combined various models of incorporation in accordance with educational level and context. One step involves the creation of themed classrooms in 100% (1.800) of public secondary schools; mobile labs in 300 schools; fixed labs in 83 schools, as well as the distribution of laptop computers to more than 33.000 teachers[107]. As has been mentioned, this plan not only includes the provision of equipment, but also technical support on the effective pedagogical use of ICTs[108]. Thus, in 2012 the Ministry launched the "Plan for ICT Access

100. *Ibidem*.

101. Ministerio de Educación y Cultura y Consejo Nacional de Educación y Cultura, *op. cit.* (note 93), p. 16.

102. Sistema de Información de Tendencias Educativas en América Latina (2012, December 25). La brecha digital en América Latina. *Dato Destacado*, p. 4. Available at http://www.siteal.iipe-oei.org/sites/default/files/siteal_datodestacado25_20121205.pdf.

103. *Ibidem*, p. 5.

104. Silva Quiroz, Juan (n.d.). Inserción de TIC en Formación Inicial Docente. *Red Latinoamericana Portales Educativos*. Available at http://www.relpe.org/especial-del-mes/insercion-de-tic-en-formacion-inicial-docente.

105. Ministerio de Educación y Cultura, *op. cit.* (note 90), p. 16.

106. *Ibidem*, p. 17.

107. Ministerio de Educación y Cultura (2013). *Incorporación de TIC en el Sistema Educativo Nacional*. Paraguay. Available at http://www.mec.gov.py/cms/adjuntos/6640.

for Public Sector Teachers," in which teachers have the opportunity to enroll in courses offered by the MoECPy and receiving support in the use of digital tools for administration tasks, resulting in improvements in their workplace performance through the use of ICTs[109].

The provision of computers follows the 1:1 model for both students and teachers "with connectivity, security, and Paraguayan contents."[110] Equipment purchases are planned through public contracting, after conducting a review of standard requirements in the region and in the country aimed at providing quality equipment. As part of the public education policy, free software will be used for this equipment. The budget provides for equipment purchases, improvement of facilities and security infrastructure, and teacher training. There is no mention of the development of Paraguayan educational contents.

The NGO Paraguay Educa carried out one noteworthy project during the 2009-2010 period in Cacupé, capital of the Cordillera Department. One of the project's actions involved distributing XO computers in order to help reduce the digital divides[111]. Upon evaluation, the project produced positive results in its technical aspect as well as in the appropriation of technologies. It is worth pointing out that ICTs were more successfully incorporated in those schools where administrators offered greater attention and support for the program, and where teachers demonstrated greater capacity for the didactic and pedagogical use of these devices. This can quite probably be extrapolated to many of the educational programs implemented by each of the countries studied. We may conclude that an effective program for the appropriation of ICTs in education requires the involvement of the entire school community.

Although this country lacks an official OER policy, the MoECPy recently launched the "Paraguay Aprende" (Paraguay Learns) educational portal, which seeks to be a virtual clearinghouse for the country's educational community and to encourage the use of educational/pedagogical contents and services[112]. This platform is also framed within the program to incorporate ICTs into the Paraguayan educational system, implemented by the

General Directorate for Science and Educational Innovation at the MoECPy. The portal is part of the Latin American Network of Educational Portals (Relpe in Spanish) and has opted for the use of free software. It offers resources, products and services, forums, digital educational contents, experience banks, articles, educational websites and events, accessible only upon registration. Upon the writing of this report, the portal still lacked terms and conditions of use.

As we have seen, Paraguay presents a more challenging socio-economic context for incorporating ICTs to educational processes than other countries studied. Notwithstanding, it does appear to acknowledge the value it holds for the long-term development of the country, and is undertaking significant efforts to reach the level of its neighboring countries. Despite this fact, it was not possible to find data to support the firm intention to set a government policy that acknowledges the value of OER.

E. Uruguay

The Uruguayan Constitution establishes free and public elementary and secondary education, higher education, and industrial, artistic and physical education. On the other hand, the Uruguayan General Education Act (GEAUy) establishes that the State is responsible for providing the necessary resources to ensure the right to education (article 19). Although this provision does not determine a minimum percentage to be devoted to funding this sector, article 41 of the GEAUy contemplates the provision of the necessary resources to allow educational establishments to achieve the objectives of their educational project[113].

Public spending in education has increased in the past few years, from 3.2% of GDP in 2004 to 4.5% in 2011[114]. The following table illustrates the evolution of education spending in this period.

According to the sources consulted, 77.5% of the education budget in 2013, received by the National Public Education Administration (ANEP in Spanish), is destined mainly to teacher salaries[115]. This means that "8 of every 10 pesos invested

108. *Ibidem*, p. 6

109. MEC propone plan de acceso a TIC para docentes del sector oficial (2012, November 23). *Noticias*. Available at http://www.mec.gov.py/cms/entradas/292704-mec-propone-plan-de-acceso-a-tic-para-docentes-del-sector-oficial.
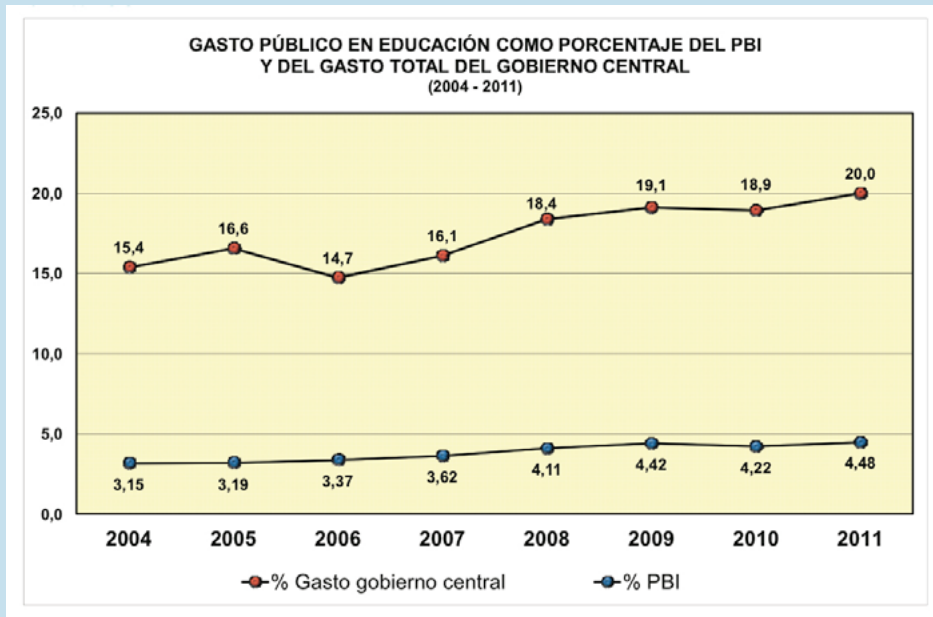
110. Ministerio de Educación y Cultura (2011). TIC en educación: formación docente. *La pizarra*. 2(1), p. 7. Available at http://www.mec.gov.py/cms/adjuntos/2978.

111. Severin, E. & Capota, C. (2011). *Modelos uno a uno en América Latina y el Caribe. Panorama y perspectivas.* Banco Interamericano de Desarrollo, p. 23. Available at http://idbdocs.iadb.org/wsdocs/getdocument.aspx?docnum=35838865.

112. See "*Paraguay Aprende*" educational portal website at http://www.paraguayaprende.edu.py/index.php/es.

113. Muñoz, *op. cit.* (note 46), p. 41.

114. Ministerio de Educación y Cultura (2012). *Anuario Estadístico de Educación*, p. 167. Available at http://educacion.mec.gub.uy/boletin/Anuario2011/ANUARIO%202011%20-%201-2-13.pdf.

GASTO PÚBLICO EN EDUCACIÓN COMO PORCENTAJE DEL PBI Y DEL GASTO TOTAL DEL GOBIERNO CENTRAL (2004 - 2011)

in ANEP are devoted to salaries"[116]. Therefore, it may be safe to assume that the remainder is spent in investments, among which we may find educational resources.

1. School Textbooks and Books

The Uruguayan State plays an important role as regulator and promoter of the publishing industry, either by lowering the price of paper or by providing tax exemptions as provided by the Book Act[117]. In addition, the State is one of the main buyers in the publishing market, in particular regarding textbooks for libraries and schools. Nonetheless, it also acts as publisher of didactic materials, mainly for second, third, and fourth grade, in competition with the domestic industry[118].

The data found in the course of this investigation does not allow us to conclude that there is a specific procedure to determine how the state conducts the purchase of educational materials. The information analyzed only gives us some indication of a public bidding procedure for the production and procurement of textbooks. But there is no clarity about the frequency with which these are purchased, except for some concrete programs, driven mainly by ANEP and its various councils, including the Central Directive Council, the Initial and Primary Education, Lower Secondary Education, Upper Secondary Education, and Technical-Professional Education Councils.

As part of the National Reading Plan, in effect since 2005, the Uruguayan Ministry of Education and Culture (MoECUy) has focused on the promotion of reading through the creation of public libraries and reading spaces in impoverished areas, the expansion of bibliographic archives, as well as on raising public awareness, conducting research, and advising on reading and ICT matters[119]. The plan also integrates the purchase and distribution of books. According to the information issued by the National Reading Plan Coordinator, the Ministry of Education and Culture devotes close to one million Uruguayan pesos per year (approximately 47 thousand dollars) to the purchase of books, although it also receives donations[120]. For example, in 2012, the Banco de la República Oriental

115. Charquero, G. (2012, June 18). En el año 2013 salarios se llevarán el 77.5% del presupuesto educativo. *El Observador*. Available at http://www.elobservador.com.uy/noticia/226317/en-el-ano-2013-salarios-se-llevaran-el-775-del-presupuesto-educativo.

116. Ministerio de Educación y Cultura, *op. cit.* (note 114), p. 166.

117. Act 15.913 of November 27, 1987.

118. Ministerio de Educación y Cultura et al. (2009). *Conglomerado Editorial — Plan de Refuerzo de la Competitividad*, p. 23. Available at http://www.mec.gub.uy/innovaportal/file/5535/1/conglomerado_editorial_plan_refuerzo_de_la_competitividad.pdf.

119 Ceretta Soria, M. (2012). *Políticas y planes de lectura: El caso de Uruguay*. La Plata, Argentina: Universidad de la Plata, p. 47. Available at http://www.memoria.fahce.unlp.edu.ar/art_revistas/pr.5319/pr.5319.pdf.

de Uruguay, a State-owned bank, donated 4.500 textbooks, which were given to the Universidad del Trabajo de Uruguay.

In slight contrast to the other countries studied, Uruguay is not only a customer in the publishing market, but also a competitor, since it devotes part of its resources to the publishing of school textbooks. This experience may be of use for the future adoption of the principles of the Paris OER Declaration, although one would have to estimate the potential consequences for a paper-producing country.

2. Education and ICTs

Seeking to advance towards becoming an Information and Knowledge Society, Uruguay created the Plan for Educational Connectivity in Basic IT for Online Learning (Ceibal Plan)[121]. The Ceibal Plan is an educational policy for including ICTs that is innovative and unprecedented worldwide. It consists in the delivery of a laptop computer universally by employing a 1:1 model. The distribution of these laptops does not constitute an end in itself, but rather as part of a pedagogical proposal aimed at promoting equality and the reduction of the existing digital divide, in order to provide higher quality education and to promote access to culture[122].

Thanks to the actions carried out thus far, 100% of public primary schools have been covered, and since 2010, the program began expanding into other educational levels (secondary, technical, early childhood, and teacher training)[123]. Private schools have had the possibility to participate, but not free of charge.

This initiative has been associated with training programs for 25.000 elementary, secondary and teacher training students, either in person or online. In addition, other public bodies, such as the National Telecommunications Administration, which is responsible for developing the country's telecommunication infrastructure, have supported it. With the goal of having every student enjoy Internet connectivity within 300 meters of home, the Ceibal Plan has managed to connect to the Internet:

2.100 public schools (99% of all schools), 58 early education centers, 250 secondary schools (99% of all basic cycle schools,

that is, comprising the first 3 years of secondary school), 103 centers belonging to the Universidad del Trabajo del Uruguay, as well as 94 private schools.

Moreover, these connections have covered non-formal education centers, institutions serving homeless children, underserved neighborhoods, housing complexes, and public spaces.

On the other hand, Uruguay lacks a consolidated policy for open educational resources, and the use of open licenses is uncommon, or it occurs in isolation and without systematic coordination. The survey conducted by UNESCO and by the Commonwealth of Learning with various governments around the world, provides additional information on Uruguay, namely (1) that the "*Uruguay Educa*" (Uruguay Educates) educational portal provides access to open educational resources for teachers; (2) that a series of science videos have been produced and transmitted on Uruguayan national television, as well as on YouTube; and (3) that the Ceibal Plan includes the development and use of OER as a tool for supporting classroom and independent learning activities. Although this information does not fully coincide with the terms of use of the "*Uruguay Educa*" portal, which makes no mention of OER, it is possible to find some resources with flexible licenses, such as those from Creative Commons[124].

Ceibal Plan is widely acknowledged worldwide for having achieved major goals, but still lacks a more comprehensive approach to OER. Notwithstanding, the Uruguayan experience with Plan Ceibal is perhaps a first step in paving the way to the future adoption of OER as part of educational policy.

Conclusions

Throughout this study we have outlined some general aspects of the process by which school textbooks and books are developed and purchased, destined for the national education systems of five Latin American countries. One could hardly conclude that government policies for the procurement of educational resources are lined up with the principles expounded by the Paris Declaration. Some initiatives and programs are to some extent aligned with the OER movement, but there is still a long road ahead.

120 MEC invierte anualmente 1 millón de pesos en libros (2013, March 12). *La República*. Available at http://diariolarepublica.net/mec-invierte-anualmente-1-millon-de-pesos-en-libros.

121. Presidential Decree 144/007 of April 18, 2007.

122. Sunkel, G. & Trucco, D. (eds. 2012). *Las tecnologías digitales frente a los desafíos educación inclusiva en América Latina. Algunos casos de buenas prácticas*. Santiago, Chile: Comisión Económica para América Latina y el Caribe, p. 128. Available at http://www.cepal.org/publicaciones/xml/4/48484/LasTecnologiasDigitales.pdf.

123. Lamschtein, S. & Rivoir, L. (2012). *Cinco años del Plan Ceibal: algo más que una computadora para cada niño*. Uruguay: Unicef. p. 38. Available at http://www.unicef.org/uruguay/spanish/ceibal-web.pdf.

124. See the "*Uruguay Educa*" website at http://www.uruguayeduca.edu.uy.

In general terms, some of the countries studied have seen some sustained —yet not exponential— growth on education investment in recent years. Chile and Paraguay are exceptions to this trend, where perhaps the effort has not been sufficient. Despite the lack of concrete spending data on the provision of educational materials, it is clear that countries do purchase and offer their elementary and secondary students free educational materials, and yet have not taken steps beyond this option. For the production of these materials, each of these countries has designed mechanisms for the acquisition of textbooks and books that depend on what is available in the commercial market. Some isolated projects have proposed developing the textbooks and assuming the costs of production. However, even for these exceptions, the procurement still result in the purchase of final products that are subject to the rationale of commercial purchase.

One of the main difficulties faced in conducting this analysis was the lack of information available from the ministries of education regarding their detailed expenditure. There was willingness by government officials to provide the necessary figures to identify the detailed expenditure, but communication was not entirely satisfactory. This would appear to be due to the fact that the countries themselves have not systematized this information in such a way that it is easily identifiable.

Starting from the figures found, we do know that investment in education closely matches administrative and operational expenses. As mentioned above, these expenses comprise between 75% and 95% of education budgets. Keeping in mind that the remaining percentage also includes subsidies or transfers to private entities (student households and other private institutions), as well as expenditures on educational resources, among others, it may be supposed that the proportion allocated to the procurement of school textbooks does not entail an inordinate expense.

In fact, by and large, the countries included in this study do not develop their own material, i.e., they are not content producers. They are, essentially, consumers in the publishing market. The general model for expenditure in school textbooks in the region is that of purchases of goods, with some minor variations in the choice of procedure. In general, textbook purchases correspond to the overall system of procurement of goods by public administrations, which are often reduced to standardized public bidding models. Under this rationale, the State has become a passive agent of the publishing market, granting strong economic power to the school publishing industry. This situation is not intrinsically negative, but it could be better structured in order to make the most of mutually beneficial models. These would be models in which the State could support and develop the industry, but addressing the particular needs

of the education system, and exploring the postulates of the Paris OER Declaration.

Despite the marginal expense of textbook purchases for the buyer (national education ministries), we were able to establish that it constitutes a substantial percentage of the publishing market within each country. Besides, it is interesting to note that in overall terms, the participation of foreign publishers in the region is significant. One should pay special consideration to the growing presence of transnational publishers in the Argentinian market, which reaches 35%, and by Spanish publishers who encompass 25% of the market in Colombia and 47% in Chile, for instance.

All five countries have started developing digital tools in education. Therefore, it would appear that the second principle of the Paris Declaration —"Facilitate enabling environments for use of Information and Communications Technologies (ICT)"— has made greater inroads in the region. All countries have an interest in advancing and giving priority to this sector. However, only Uruguay and Colombia have related this with steps towards openness, with ideas that could be more easily associated with the concept of OER. The countries analyzed have concerned themselves with thinking beyond the acquisition of educational resources and their free distribution, considering also the way in which such resources will circulate in the digital realm. Even though each of these countries participates in initiatives such as national education portals, the preeminent concern is to endow them with resources to which the population may have free access, leaving the type of licensing adopted as a secondary concern.

In exploring digital environments, governments begin to think beyond what is simply free of charge. This becomes palpable in the production/acquisition projects for these materials, where governments are reproducing, with some adjustments, their digital educational material procurement based on their experiences in the analogue world. Uruguay, under Ceibal Plan, has been negotiating licenses to use the material for a period of two years. Colombia and Argentina are exploring public tenders for developers of digital educational resources in which they require the waiving of rights, with the understanding that funding production allows them to request control over the way in which these developments will be used in the future. Colombia, moreover, has cooperation agreements for the production of contents and applications, even though they do not reveal the type of licensing that will be applied. However, none of these covers the full scope of OER.

From the data gathered, we deduce that public spending for the acquisition of educational materials is not part of any state policy. On the contrary, it falls at the mercy of succeeding administrations that promote initiatives and projects in the absence of general guidelines. In this field, the

only such attempt that has made inroads has been the *National Digital Open Educational Resources Strategy* in Colombia, where at least some thought has been given to future re-use.

Reducing the digital divide appears to be the ultimate goal of government policies on ICTs and education. To do this, the countries studied have leaned towards the 1:1 model, or one laptop per child, to provide access for primary school students. This is a clear policy in Uruguay, Argentina and Paraguay. Chile has opted for a variation on the theme, seeking to address learning problems in language and math by providing one laptop per student in the classroom. In contrast, the Colombian Ministry of National Education has diverged from this educational approach after concluding that results in other latitudes are far from ideal. In spite of this, Colombia faces the challenge of implementing uncoordinated policies, in which the Ministry of ICTs is in the midst of a national campaign to distribute tablets and computers to primary and secondary students.

On the other hand, educational systems continue to rely on paper textbooks. Several reasons come together to explain this fact. On one hand, educational institutions in the countries studied, by and large, remain anchored in traditional teaching methods. Another reason may be the digital divide, which compounds the high levels of social inequality in the region. Despite the great efforts made to introduce digital technologies into educational environments, these have not been effectively appropriated. Distrust of digital contents and a lack of skills for the pedagogical uses of ICTs by teachers may also help explain the preeminence of paper textbooks. As we saw in the case of Paraguay, it is likely that marketing by publishers has some influence in this area.

Educational portals in the countries studied have not replaced physical contents, nor have they transformed teaching methods. Digital contents do not appear to have the expected impact on teaching and learning. In Colombia, for instance, according to the Ministry of National Education, the hours of peak usage of the "*Colombia Aprende*" educational portal happen at night. This suggests that the portal is underused in the class-

room, showing that national efforts to promote the appropriation of digital technologies for education are not fully effective.

In this analysis, it is important to consider that national purchases of school textbooks play a significant role in the publishing industry. In consequence, decisions made in the future can have significant impacts on this sector. Therefore, policy decisions based on the principles expounded in the Paris OER Declaration will require dialogue between governments and the publishing industry that lead to transformations in the current relationship and foster alternatives that do not overburden the government.

Brazil, as noted in the introduction, is not too far from the situation described by this report[125]. Just as in the countries analyzed, Brazilian education is free and mandatory. In recent years, investment in education has experienced significant growth, and yet the system has not effectively addressed its major challenges: quality, equity, appropriate use of resources, teacher training, etc. The publishing market for school textbooks is characterized by high prices, and it is strongly concentrated in the State as its main consumer. Great efforts have been made to connect schools to the Internet and to foster the adoption of digital educational tools. But despite the fact that some projects such as Projeto Folhas have experimented with the production and use of OER, there are no explicit and coherent policies that promote the use of OER.

In conclusion, the existing systems in the countries studies have not learned how to make the most of recent technologies, nor of the principles envisioned by the OER movement. The adoption of OER policies can produce concrete advantages in public education: enhancing learning opportunities and greater access to knowledge; strengthening the educational communities thereby creating a more robust education system as a result; reinforcing and diversifying educational curricula; and reducing educational costs, resulting in a more accessible education. Nowadays, however, the paradigm is rooted in the production of paper textbook by an industry motivated by profit rather than by the benefit of society.

125　For more information, see Rossini, *op. cit.* (note 3).

Recommendations

In order to transform the development and acquisition of educational resources in the countries studied, governments should become facilitators so educational systems become content producers. In this way, public funds could be used more efficiently for the benefit of society as a whole. The above should be accompanied by transparency policies that account for the use of public funding and include progressive impact assessments of such uses. Moreover, the State ought to identify and foster existing communities that are proliferating thanks to technological enablers, and help them become platforms for the development and promotion of OER, i.e., collaborative knowledge producers.

If countries in the region are to be able to take on the challenges and proposals of the Paris OER Declaration, they must make adjustments to their public spending policies in educational materials. These reforms can be summarized as follows:

1. *A commitment to OER will require an adjustment by governments of the procurement model.* Quite probably, publishers will lose some of their current preeminence. This will force both parties —the State and the publishing industry— to renegotiate their relationship, a dialogue that will be neither easy nor immediately fruitful. Notwithstanding, a paradigm shift will allow the school community to become a vigorous player in content development, and cease to be a passive consumer.

   The former entails replacing the acquisition model with a production model. Understanding how important public expenditure is for the publishing industry, it would essential to reformulate the existing relationship of power/control. The recommendation is to propose some adjustments to the existing model of purchasing finished products from the publishing industry. The industry could shift to providing support to improve the capacities of the educational system as a whole with the goal of sustainably developing quality educational materials. This effort begins by providing teachers with materials that they can in turn reuse and reformulate, instead of simply "consume." Governments ought to consider modifying the conditions for the purchase of school textbooks, by making use of the central premise that states that whatever is funded with public resources ought to be a public good at the service of the broader community. In this process, perhaps the most significant change resides in the use of open licenses, which would allow teachers, from now on, to manage textbook copyrights in such a way that facilitates searching, reusing and sharing of materials. Quite clearly, this adjustment would align national policies

with several of the statements in the Paris OER Declaration. For governments, it would also be the most challenging reform advocated by the Declaration.

2. It will also be important *to build stronger connections between programs for the educational use of ICTs and the acquisition of digital educational materials that fulfill international OER standards.* Greater synergy between these government policies can address many of the current problems related to the lack of relevance, diversity and quality of educational materials.

3. This investigation revealed *the need to work to counteract the general lack of international, regional, and national indicators that would facilitate measuring the impact of OER policies, and of the use of public funding to finance their production and use, among other factors.* Developing these indicators would doubtlessly result in improved scrutiny of public investment on the production of educational resources. This recommendation goes hand in hand with the need to conduct an economic analysis of current investment by these countries on the acquisition of educational resources, encompassing the various national and/or subnational programs responsible for developing these resources. Such analysis should also take into account the publishing market, in such a way that it can measure the real price of producing educational resources. A study based on clear figures should allow us to produce even stronger arguments to convince governments —and perhaps educational publishers as well— that taking the chance to produce OER is a strong move for education.

4. On the other hand, in response to the difficulties we encountered for finding concrete data on the acquisition of educational resources, *we recommend that governments produce better information, figures and indicators regarding spending in these areas.* If this information were to be lifted and compiled, the State itself would be in a better position to conduct its own impact assessment for these expenditures. Any such process will require indicators designed to facilitate this analysis.

5. In direct relation to the recommendations above, we see *the urgent need to inform and train the education community (administrative staff, faculty, and even students), on the nature of OER and the advantages they may offer to the educational process.* A commitment to the Paris OER Declaration demands a community that is knowledgeable on the subject and familiar with the OER ecosystem. In this regard, it is also important that the educational community understands that the OER movement goes beyond making ac-

cess to educational materials free of charge, or enabled by ICTs in the classroom. To harness their full potential, governmwents ought to look into the underlying characteristics that define OER, and aim to recreate them, especially in their efforts to harness ICTs to maximize their impact.

Annex

Graphs

Graph 1. Public Expenditure on Education as a percentage of GDP (2000-2008), Source: UNESCO & Prelac (2012). *Regional Monitoring Report on Progress Toward Quality Education for All in Latin America and the Caribbean, EFA 2012*. Santiago, Chile: UNESCO, p. 30. Available at http://unesdoc.unesco.org/images/0021/002158/215878e.pdf.

Graph 2. Public Spending on Education and Performance in PISA. Source: OECD (2009). *Latin America Economic Outlook 2009*, p. 16. Available at http://www.oecd.org/dev/americas/41577384.pdf.

Graph 3. Mean scores on PISA reading test by income per capita, 2009. Source: Ganimian, A.J. & Solano Rocha, A. (2011). *Measuring Up? How Did Latin America and the Caribbean Perform on the 2009 Programme for International Student Assessment (PISA)?* USA: PRELAC p. 46. Available at http://www.thedialogue.org/PublicationFiles/Preal_PISA_ENGLowres.pdf.

Graph 4. Mean scores on PISA math test by income per capita, 2009. Source: Ganimian, A. & Solano Rocha, A. (2011). *Measuring Up? How Did Latin America and the Caribbean Perform on the 2009 Programme for International Student Assessment (PISA)?* USA: PRELAC, p. 47. Available at http://www.thedialogue.org/PublicationFiles/Preal_PISA_ENGLowres.pdf.

Graph 5. Mean scores on PISA science test by income per capita, 2009. Source: Ganimian, A.J. & Solano Rocha, A. (2011). *Measuring Up? How Did Latin America and the Caribbean Perform on the 2009 Programme for International Student Assessment (PISA)?* USA: PRELAC, p. 48. Available at http://www.thedialogue.org/PublicationFiles/Preal_PISA_ENGLowres.pdf.

Graph 6. Participation by publishers in purchasing processes, 2008. Source: Ministerio de Educación (2009). PowerPoint Presentation on "Textos Escolares: un mercado amplio, estable y transparente." Available at http://portal.textosescolares.cl/imagen/File/Centro_Documentacion/Presentaciones/Textos_Escolares_Chile.ppt.

Graph 7. Participation by Publishers in the Purchasing Process by Country of Origin, 2008. Source: Ministerio de Educación (2009). PowerPoint Presentation on "Textos Escolares: un mercado amplio, estable y transparente." Available at http://portal.textosescolares.cl/imagen/File/Centro_Documentacion/Presentaciones/Textos_Escolares_Chile.ppt.

Graph 8. MoNECo Investment Budget, 2006-2013 (Amounts in Current Pesos). Source: Ministerio de Educación (n.d.). Rendición de cuentas Diciembre 2011-Septiembre 2012 . Colombia, p. 91. Available at http://www.mineducacion.gov.co/1621/articles-194741_archivo_pdf_informe_octubre19.pdf.

Graph 9. Public Spending on Education as a Percentage of GDP and of Total Spending by Central Government (2004-2011). Source: Ministerio de Educación (2012). Anuario Estadístico de Educación. Uruguay, p. 167. Available at http://educacion.mec.gub.uy/boletin/Anuario2011/ANUARIO%202011%20-%201-2-13.pdf.

Charts

Charts 1. Sales of Copies. Source: Cámara Colombiana del Libro (2011). *Encuesta del Libro en Colombia 2011*. Colombia, p. 10. Available at ftp://ftp.camlibro.com.co/Estadisticas/Presentacion%20Estadisticas%202011.pdf.

Chart 2. Total Book Production by Sub-sector. Source: Cámara Colombiana del Libro (2011). *Encuesta del Libro en Colombia 2011*. Colombia, p. 20. Available at ftp://ftp.camlibro.com.co/Estadisticas/Presentacion%20Estadisticas%202011.pdf.

Chart 3. Imports by Publisher's Country of Origin. Source: Cámara Colombiana del Libro (2011). *Encuesta del Libro en Colombia 2011*. Colombia, p. 39. Available at ftp://ftp.camlibro.com.co/Estadisticas/Presentacion%20Estadisticas%202011.pdf.

**2012 WORLD OPEN EDUCATIONAL RESOURCES (OER) CONGRESS
UNESCO, PARIS, JUNE 20-22, 2012**

2012 PARIS OER DECLARATION

Preamble

The World OER Congress held at UNESCO, Paris on 20-22 June 2012,

Mindful of relevant international statements including:

The Universal Declaration of Human Rights (Article 26.1), which states that: "Everyone has the right to education";

The International Covenant on Economic, Social and Cultural Rights (Article 13.1), which recognizes "the right of everyone to education";

The 1971 Berne Convention for the Protection of Literary and Artistic Works and the 1996 WIPO Copyright Treaty;

The Millennium Declaration and the 2000 Dakar Framework for Action, which made global commitments to provide quality basic education for all children, youth and adults;

The 2003 World Summit on the Information Society, Declaration of Principles, committing "to build a people- centred, inclusive and development-oriented Information Society where everyone can create, access, utilize and share information and knowledge";

The 2003 UNESCO Recommendation concerning the Promotion and Use of Multilingualism and Universal Access to Cyberspace;

The 2005 UNESCO Convention on the Protection and Promotion of the Diversity of Cultural Expression, which states that: "Equitable access to a rich and diversified range of cultural expressions from all over the world and access of cultures to the means of expressions and dissemination constitute important elements for enhancing cultural diversity and encouraging mutual understanding";

The 2006 Convention on the Rights of People with Disabilities (Article 24), which recognises the rights of persons with disabilities to education;

The declarations of the six International Conference on Adult Education (CONFINTEA) Conferences emphasising the fundamental role of Adult Learning and Education.

Emphasizing that the term Open Educational Resources (OER) was coined at UNESCO's 2002 Forum on Open Courseware and designates "teaching, learning and research materials in any medium, digital or otherwise, that reside in the public domain or have been released under an open license that permits no-cost access, use, adaptation and redistribution by others with no or limited restrictions. Open licensing is built within the existing framework of intellectual property rights as defined by relevant international conventions and respects the authorship of the work";

Recalling existing Declarations and Guidelines on Open Educational Resources such as the 2007 Cape Town Open Education Declaration, the 2009 Dakar Declaration on Open Educational Resources and the 2011 Commonwealth of Learning and UNESCO Guidelines on Open Educational Resources in Higher Education;

Noting that Open Educational Resources (OER) promote the aims of the international statements quoted above;

Recommends that States, within their capacities and authority:

a. *Foster awareness and use of OER.*

Promote and use OER to widen access to education at all levels, both formal and non-formal, in a perspective of lifelong learning, thus contributing to social inclusion, gender equity and special needs education. Improve both cost-efficiency and quality of teaching and learning outcomes through greater use of OER.

b. *Facilitate enabling environments for use of Information and Communications Technologies (ICT).*

Bridge the digital divide by developing adequate infrastructure, in particular, affordable broadband connectivity, widespread mobile technology and reliable electrical power supply. Improve media and information literacy and encourage the development and use of OER in open standard digital formats.

c. *Reinforce the development of strategies and policies on OER.*

Promote the development of specific policies for the production and use of OER within wider strategies for advancing education.

d. *Promote the understanding and use of open licensing frameworks.*

Facilitate the re-use, revision, remixing and redistribution of educational materials across the world through open licensing, which refers to a range of frameworks that allow different kinds of uses, while respecting the rights of any copyright holder.

e. *Support capacity building for the sustainable development of quality learning materials.*

Support institutions, train and motivate teachers and other personnel to produce and share high-quality, accessible educational resources, taking into account local needs and the full diversity of learners. Promote quality assurance and peer review of OER. Encourage the development of mechanisms for the assessment and certification of learning outcomes achieved through OER.

f. *Foster strategic alliances for OER.*

Take advantage of evolving technology to create opportunities for sharing materials which have been released under an open license in diverse media and ensure sustainability through new strategic partnerships within and among the education, industry, library, media and telecommunications sectors.

g. *Encourage the development and adaptation of OER in a variety of languages and cultural contexts.*

Favour the production and use of OER in local languages and diverse cultural contexts to ensure their relevance and accessibility. Intergovernmental organisations should encourage the sharing of OER across languages and cultures, respecting indigenous knowledge and rights.

h. *Encourage research on OER.*

Foster research on the development, use, evaluation and re-contextualisation of OER as well as on the opportunities and challenges they present, and their impact on the quality and cost-efficiency of teaching and learning in order to strengthen the evidence base for public investment in OER.

i. *Facilitate finding, retrieving and sharing of OER.*

Encourage the development of user-friendly tools to locate and retrieve OER that are specific and relevant to particular needs. Adopt appropriate open standards to ensure interoperability and to facilitate the use of OER in diverse media.

j. *Encourage the open licensing of educational materials produced with public funds.*

Governments/competent authorities can create substantial benefits for their citizens by ensuring that educational materials developed with public funds be made available under open licenses (with any restrictions they deem necessary) in order to maximize the impact of the investment.

2012-06-22

About our partner:

Karisma Foundation is a Colombian civil society organization founded in 2003 and located in Bogotá. Its mission is to support and foster the best use of Information and Communications Technologies (ICTs) in Colombian society, seeking for responsible and thoughtful appropriation in the various society sectors. Since its establishment, its labor has focused on the use of ICTs in learning processes and digital technology challenges. It has also been devoted to ICT-related social innovation projects. These works have been the bridge to thinking about a human rights-based digital framework and influencing public policy.

Fundación
Karisma
www.karisma.org.co

During the last decade, the rapid advancement of technologies make extremely easy for people to create and share materials. The development of open licensing and Open Educational Resources (OER) helps address this gap, by changing and questioning the current paradigm.

The Paris Open Educational Resources Declaration (2012) of the United Nations Educational, Scientific and Cultural Organization (UNESCO) understands that these resources include any teaching, learning or research material in the public domain or published with an open license to be used, adapted and distributed free of charge.

In the Report entitled "Public Expenditure on Education in Latin America. Can it serve the Paris OER Declaration's Purposes?, the authors identify and analyze public policy throught the investment and expenditure that the governments of Argentina, Chile, Colombia, Paraguay and Uruguay commit to make in the development and purchasing of textbooks, books and digital content for primary and secondary education (K-12). The aim is to identify and propose actions to pave the way toward policies that harness the Declaration's principles.