**Chile:**

**An Overview of Open Educational Resources (OER) Projects, Policies, and Research**

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**Overview**

The Republic of Chile is a Spanish-speaking country in South America with an estimated population of 17.77 million and a GDP of US$258.1 billion. With a GNI per capita of US$14,900, Chile is considered a high income country[[1]](#footnote-0). However, with a GINI coefficient of 0.50, the income inequality is the highest in the Organisation for Economic Co-operation and Development (OECD) countries[[2]](#footnote-1), which directly influences access to education. According to the OECD Chile has recently embarked upon “wide-ranging reform to improve the quality and equity of its education system on several fronts, including early childhood education and care, school funding, student selection, school governance, teacher career pathways, vocational education and training and tertiary education”[[3]](#footnote-2).

Against this backdrop this report provides an overview infrastructural, legal, socio-cultural and/or economic factors that might influence the adoption of OER in post-secondary education as well as the current OER projects, policies and research in Chile.

**1. Infrastructure and technical readiness for OER adoption**

In terms of infrastructure, Chile boasts 59.2% Internet penetration, which is one of the highest in the South American region only behind Argentina.[[4]](#footnote-3)

Chart 1: Internet Penetration (%)



Source: [www.internetworldstats.com](http://www.internetworldstats.com/) (data updated for 2011)

Similarly, Chile has a high level of broadband penetration (7.1% mobile Internet penetration and 10.5 fixed Internet penetration) when compared to the rest of South American countries

Chart 2: Broadband Internet Penetration (%)



Source: ITU 2011, García Zaballos & López-Rivas 2012

According to Bibolini (2013), “The high level of broadband penetration in Chile compared with other Latin American countries can be attributed to the country’s relatively high GDP and its receptivity towards new technologies. Broadband plans on offer in Chile are among the fastest and least expensive in Latin America”.[[5]](#footnote-4) Indeed, Chile’s broadband is the fastest in South America at 6.77 Mbps:

Chart 3: Broadband Speed (Mbps)



Source: Galperin and Ruzzier 2011, cited in García Zaballos & López-Rivas 2012

Additionally, the cost of broadband in Chile is the lowest in the region at USD PPP 18 per Mbps:

Chart 4: Average Price per Mbps (USD PPP per Mbps)



Source: Galperin and Ruzzier 2011, cited in García Zaballos & López-Rivas 2012

In terms of uplink and downlink speed, only Chile and Ecuador are above the South American uplink average, and just Chile and Brazil are above the downlink average (ITU 2013).

To sum up, the situation in Chile regarding infrastructure and technical readiness is clearly better off than in most South American countries. This fact is a consequence of sound policies implemented by successive governments, as we will see in a following section in this document.

**2. Educational framework. Higher Education Institutions (HEIs) in Chile**

From 1980 on, Chile experienced an extraordinary expansion of its HEIs: from eight in 1980 to 176 in 2010, which supposed an increase in the total number of tertiary education students as well as in the proportion of families’ first generation of students in higher education (Farcas 2010). From the total of 176 HEIs existing, 61 are universities, 74% of which are private institutions.

The World Bank indicates that tertiary education enrolment in the country rose by 51% between the years of 2005 and 2010, but “Chile was able to improve both quality and equity of education despite this massive expansion [because it] passed legislation on quality assurance and student financial aid, set up a tertiary education information system, increased the availability of advanced human capital and research capacity, and piloted four performance agreements with universities”.[[6]](#footnote-5)

Enrolment coverage reaches 55%. 68% of the total coverage corresponds to private universities (Cuenca 2013a: 3). Chile has the second highest proportion of private enrolment in South America, only behind Brazil. This fact might have an impact in deepening unequal access to tertiary education as the Chilean students’ protests during the last years expressed.

According to Farcas (2010), the use of ICTs in higher education was incorporated actively since 2000, but it is “mainly understood as a complementary mechanism of on campus formation (e-support)” (p. 15). The author claims that “e-learning has been specially used in the development of short term courses focused on adult training and specialization, (…) Therefore, there are many e-learning programs which do not lead to the achievement of a degree” (p. 15). On the other hand, Farcas remarks that since the National Service for Training and Employment (SENCE) offers tax incentives to companies that offer in-service training to their employees, those organizations have become significant providers of virtual modalities of training.

**3. Legal and policy aspects**

Chile adheres to regional norms regarding copyright and intellectual property, but is also a very active country in adapting its legislation and norms to current needs. In 2010, Chile promulgated the Net Neutrality Law and modified the Intellectual Property Law (SEDD 2013: 30). Chile is also promoting alternative forms of licensing such as Creative Commons (CC). CC representatives in Chile[[7]](#footnote-6) work with a network of volunteers who promote CC licenses among the public and the private sectors. As part of its activities, CC Chile assists the governmental offices in charge of implementing the *Agenda Digital ImaginaChile* (Digital Agenda Imagine Chile).

The country has been taking solid steps towards digital development for the last decade. The Digital Agenda 2004-2006 presented during Ricardo Lagos’ government was followed by the creation of the Committee of Ministers for Digital Development, during the following government by Michelle Bachelet. The Committee formulated the Digital Strategy 2007-2012 with the main goal of improving connectivity (SEDD 2013: 11).

The formulation of those policy instruments has been accompanied by the creation of a set of governmental institutions responsible of coordinating the digital agenda across the different economical and societal sectors of the country. Some of those institutions are the Executive Secretariat for Digital Development, The Sub-Secretariat for Telecommunications, the Modernization and Digital Government Unit, and the Executive Secretary for Digital Development (SEDD 2013: 31).

*ImaginaChile*[[8]](#footnote-7) was launched in 2013 during Sebastián Piñera’s presidency. It is a solid strategic plan that aspires to position Chile as a regional leader in the design and use of digital technologies to promote development. For that purpose, the agenda proposes to work on five strategic axes: connectivity and digital inclusion, digital development environment, education and training; entrepreneurship and innovation, and services and applications.

For connectivity and digital inclusion, the Agenda declares initiatives towards improving Internet connectivity and speed through the expansion of broadband, the adaptation of the existing normativity to current objectives, and an emphasis on digital literacy programs. It expects to achieve the following goals by 2020: 80% internet penetration, 50% of homes with a high speed Internet connection, 100% of municipalities offering free Wi-Fi service, and lowering the price of digital services to match those of the OECD countries’ average (SEDD 2013: 28).

Regarding education and training, *ImaginaChile* includes a number of initiatives concerning teacher training and the improvement of infrastructure and connectivity for better learning, as well as the development of digital resources and online education. By 2020, Chile should have 100% of the curriculum contents covered in digital educational resources, 90% of students with adequate ICT skills, 70% public schools with high-speed Internet, and 50% of school teachers prepared to use ICT in the classroom (SEDD 2013: 42).

It is fair to say, then, that Chile is one of the leading countries in South America in terms of having a positive regulatory environment towards the development of OER initiatives. However, we must take into consideration that Chile does not have a specific OER policy. As POERUP states, based on the answers to the Survey on Governments Open Educational Resources Policies,[[9]](#footnote-8)“Chile may not have a policy that deals with OER, but has a free access policy. The respondent to [Policies Survey](http://poerup.referata.com/wiki/Policies_Survey) from Chile, commenting on obstacles to the adoption of OER, noted «Real awareness of stake-holders and policy-makers: It’s not a matter of ignorance, but I think there’s a lack of deeper understanding of what the real advantages and potential of OER can contribute, not only to educational users, but to the whole educational eco-system. This lack of understanding also brings up risks related to an opposing model to the installed commercial/private model, unwilling to see if they can co-exist.”[[10]](#footnote-9)

**4. OER Programs and Initiatives**

Our search for OER initiatives in Chile shows that the country is making valuable efforts in the direction of creating and using OER, however, it is accurate to affirm that Chile could lead more initiatives in this regard.

· **educarchile**

[www.educarchile.cl](http://www.educarchile.cl/)

As a member of the *Red Latinoamericana de Portales Educativos – RELPE* (Latin American Network of Educational Portals – RELPE)[[11]](#footnote-10), Chile hosts the educational portal *educarchile*, with the support of the Ministry of Education and the Chile Foundation. *educarchile* offers free learning resources for teachers, students and families.

· **ENLACES**

<http://www.enlaces.cl/>

The Centro de Educación y Tecnología ENLACES (Education and Technology Center ENLACES), under the guidance of the Ministry of Education, offers free virtual and on-site courses to develop ICT competencies in teachers.

· **Proyecto LATin – Iniciativa Latinoamericana de Libros de Texto Abiertos (LATin Project – Latin American Initiative for Open Textbooks)**

[www.latinproject.org](http://www.latinproject.org/)[[12]](#footnote-11)

Chile participates in this initiative to create collaborative open textbooks through Universidad Austral de Chile (UACh).[[13]](#footnote-12)

**COLABORA – Comunidad Latinoamericana de Bibliotecas y Repositorios Digitales**

**(COLABORA – Latin American Community of Libraries and Digital Repositories)**

<http://www.saber.ula.ve/colabora/>

Chile takes part in this digital libraries and repositories project through Universidad Austral from Chile – UACH.[[14]](#footnote-13)

· **OCW-Universia**

<http://ocw.universia.net/es/>

Chile participates in OCW-Universia through Pontificia Universidad Católica de Chile,[[15]](#footnote-14) Pontificia Universidad Católica de Valparaíso,[[16]](#footnote-15) and Universidad de Chile.[[17]](#footnote-16) This is a network that links member institutions’ OCW sites in the OCW-Universia site.[[18]](#footnote-17)

· **APROA – Aprendiendo con Objetos de Aprendizaje (APROA Learning with Learning Objects)**

[www.aproa.cl](http://www.aproa.cl/) /<http://cursos.aproa.cl/>

APROA is a repository of learning objects. It links a number of e-learning platforms or learning objects repositories from Chilean universities,[[19]](#footnote-18) faculties in agricultural science, public administration, physics and mathematics, such as: [www.agrilearning.cl](http://www.agrilearning.cl/),<http://aproa.cl/umayor>, [www.agrimed.cl](http://www.agrimed.cl/),<http://apro.cl/inap>, [www.u-cursos.cl](http://www.u-cursos.cl/).

**5. Researchers**

Below is a list of the articles we were able to find regarding open educational resources in Chile. They are available at the SciELO and LACLO websites:

Articles available at **SciELO:**

· Chiappe Laverde, Andrés. [ACERCA DE LO PEDAGOGICO EN LOS OBJETOS DE APRENDIZAJE-REFLEXIONES CONCEPTUALES HACIA LA CONSTRUCCION DE SU ESTRUCTURA TEORICA / Pedagogical issues of learning objects-conceptual thinking towards building their theoretical structure](http://www.scielo.cl/scielo.php?script=sci_arttext&pid=S0718-07052009000100016&lang=pt). *Estud. pedagóg.;35(1): 261-272, TAB.*

· Lizarralde, Francisco A; Huapaya, Constanza R. [Análisis de una Plataforma Virtual 3-D Descentralizada para el Desarrollo de Simulaciones Educativas / Analysis of a Decentralized 3-D Virtual Platform for Educational Simulations Development](http://www.scielo.cl/scielo.php?script=sci_arttext&pid=S0718-50062012000600002&lang=pt). *Form. Univ.;5(6): 3-12, ILUS.*

· Arancibia Herrera, Marcelo. [REFLEXIONES EN TORNO A LA APLICABILIDAD PEDAGOGICA DE LA INFORMATICA: APUNTES PARA UN TRABAJO TRANSDISCIPLINARIO EN EL CURRICULO ESCOLAR / Reflections on the pedagogical applicability of computer science: Notes for a transdisciplinary work in the school curriculum](http://www.scielo.cl/scielo.php?script=sci_arttext&pid=S0718-07052001000100006&lang=pt). *Estud. pedagóg.;(27): 75-95, TAB.*

· Bucarey A, Sandra; Araya A, Erick; Cabezas O, Ximena; Álvarez G, Luis. [Contenidos de Anatomía en Diseños de Aprendizaje Dispuestos en LAMS e Integrado a Moodle / Anatomy Contents in Learning Designs Displayed in LAMS and Integrated to Moodle](http://www.scielo.cl/scielo.php?script=sci_arttext&pid=S0717-95022011000200009&lang=pt). *Int. J. Morphol.;29(2): 363-370, ND.*

· Bucarey, Sandra; Álvarez, Luis. [Metodología de Construcción de Objetos de Aprendizaje para la Enseñanza de Anatomía Humana en Cursos Integrados / Methodology to Construct Learning Object for Teaching Human Anatomy in Integrated Courses](http://www.scielo.cl/scielo.php?script=sci_arttext&pid=S0717-95022006000400011&lang=pt). *Int. J. Morphol.;24(3): 357-362, ILUS, GRA.*

· Antonio Jiménez, Angélica; Troncoso Pantoja, Brunny. [SCAFFOLDING TUTORING STRATEGY ON VIRTUAL ENVIRONMENTS FOR TRAINING / SCAFFOLDING COMO ESTRATEGIA DE TUTORIA EN ENTORNOS VIRTUALES DE ENTRENAMIENTO](http://www.scielo.cl/scielo.php?script=sci_arttext&pid=S0718-33052008000100012&lang=pt). *Ingeniare. Rev. chil. ing.;16(1): 220-231, ILUS, TAB.*

· Lopes de Sousa, Carlos Alberto; Aires, Carmenísia Jacobina; Gonçalves de Faria Lopes, Ruth. [La noción de sujeto implicado en la formación docente en una comunidad de trabajo y aprendizaje en red (CTAR) en la enseñanza superior pública / The notion of subject involved in faculty training in a community of work and learning in network (CTAR) in public superior education / A noção de sujeito implicado na formação docente em uma comunidade de trabalho e aprendizagem em rede (CTAR) no Ensino Superior público](http://www.scielo.cl/scielo.php?script=sci_arttext&pid=S0718-07052012000100017&lang=pt). *Estud. pedagóg.;38(1): 285-295, ND.*

· Cartes-Velásquez, Ricardo. [Open Access in Chilean Dentistry Journals / Acceso Abierto en las Revistas Chilenas de Odontología](http://www.scielo.cl/scielo.php?script=sci_arttext&pid=S0718-381X2010000200004&lang=pt). *Int. J. Odontostomat.;4(2): 123-126, ILUS.*

Articles available at **LACLO**:

· *Aguilar Molina, Mauricio & Sandra Bucarey Arriagada.* Objetos de Aprendizaje en la perspectiva de las Prácticas y Recursos Educativos Abiertos y los Diseños de Aprendizaje: un análisis de experiencias en Instituciones de Educación Superior Latinoamericanas

· Cechinel, Cristian. Scientific Collaboration between Countries in LACLO from a Social Network Analysis Perspective [Vol 4, No 1 (2013): LACLO 2013 - Octava Conferencia Latinoamericana de Objetos y Tecnologías de Aprendizaje](http://www.laclo.org/papers/index.php/laclo/issue/view/6)

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Cuenca, R. (2013b).*E-learning, educación superior y competitividad en Iberoamérica*. (Manuscript).

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<http://online-journals.org/i-jac/article/view/1372>

García Zaballos, A. & López-Rivas. (2012, November). Socioeconomic Impact of Broadband in Latin American and Caribbean Countries. Inter American Development Bank. (IDB Technical Note; 471).<http://www.iadb.org/intal/intalcdi/PE/2013/11427.pdf>

International Telecommunication Union – ITU (2013). *Study on international Internet connectivity Focus on Internet connectivity in Latin America and the Caribbean*. Geneva: ITU.

<http://www.itu.int/en/ITU-D/Regulatory-Market/Documents/International%20Internet%20Connectivity%20in%20Latin%20America%20and%20the%20Caribbean.pdf>

1. Data from the World Bank:<http://data.worldbank.org/country/chile>. [↑](#footnote-ref-0)
2. Data from OECD: <http://www.oecd.org/social/soc/47572883.pdf> [↑](#footnote-ref-1)
3. <http://www.oecd.org/chile/Re-shaping-teacher-careers-in-Chile.pdf> [↑](#footnote-ref-2)
4. Data from Internet World Stats: [www.internetworldstats.com](http://www.internetworldstats.com/). [↑](#footnote-ref-3)
5. <https://www.budde.com.au/Research/Chile-Telecoms-Mobile-Broadband-and-Forecasts.html>. [↑](#footnote-ref-4)
6. <http://go.worldbank.org/VDO83AOLD0> [↑](#footnote-ref-5)
7. <http://wiki.creativecommons.org/Chile> [↑](#footnote-ref-6)
8. The full-text document can be found at [www.desarrollodigital.gob.cl](http://www.desarrollodigital.gob.cl/). [↑](#footnote-ref-7)
9. <http://www.col.org/PublicationDocuments/Survey_On_Government_OER_Policies.pdf> [↑](#footnote-ref-8)
10. <http://poerup.referata.com/wiki/Chile> [↑](#footnote-ref-9)
11. <http://www.relpe.org/>. More information on RELPE in the regional review for South America. [↑](#footnote-ref-10)
12. More information on LATin Project in the regional review for South America. [↑](#footnote-ref-11)
13. [www.uach.cl](http://www.uach.cl/) [↑](#footnote-ref-12)
14. More information on the Project in the regional review for South America. [↑](#footnote-ref-13)
15. <http://www7.uc.cl/ocw/> [↑](#footnote-ref-14)
16. <http://ocw.pucv.cl/> [↑](#footnote-ref-15)
17. <http://www.lapetus.uchile.cl/lapetus/universia/index.htm> [↑](#footnote-ref-16)
18. More information on OCW-Universia in the regional review for South America. [↑](#footnote-ref-17)
19. Most of them belonging to Universidad de Chile. [↑](#footnote-ref-18)