

OVERVIEW

The 45th issue of the journal “*Calidad en la Educación*” presents eight studies addressing priority topics relating to education ranging from preschool to the transition from high school to higher education. We hope to contribute the academic community and policy makers as they reflect and debate on these issues.

The first study, “Is math ability a gender issue?: Gender stereotypes about math in kindergarten children, their families and teachers” by María Francisca del Río, Katherine Strasser and María Inés Susperreguy, explores gender stereotypes, both implicit and explicit, concerning mathematical skills in kindergarten children of varying socioeconomic status, parents, and educators at schools located in Santiago, Chile. In addition, this study seeks to establish relationships between the explicit and implicit beliefs of children, parents and educators. The results show a generalized stereotype among adults (fathers, mothers and educators) that associates academic ability in math with the male gender. Also, the research presents evidence that all children from low socioeconomic status associate math with masculine; while girls from higher socioeconomic status did not associate math with any specific gender. The findings of this research support interventions aimed at promoting the belief that boys and girls have the same opportunities to learn and achieve higher levels of mastery in math-related fields.

Then the article “Learning outcomes in La Araucanía: The gender gap on the SIMCE test and androcentrism in the discourse of language and math teachers” by María Cecilia Fernández and Scarlett Hauri, presents the results of a study that analyzed the gender gap on standardized tests for Math and Reading among 4th, 8th and 12th grade students from the Araucanía region in southern Chile including the years from 2006 to 2014. The results of a quantitative analysis show that in Math the distance between boys and girls in La Araucanía has decreased over time; while the gender gap in

language presents a sustained increase over the years in 4th and 12th grade. This research also shows that gender is not the only factor of inequality; variables of geographic location, socioeconomic status, and Mapuche cultural identity deepen the gender gap. The qualitative phase of the study, which analyzed the discourse of language and math teachers, concludes that they identify differentiated ability levels and expectations for the academic performance of boys and girls, in accordance with traditional gender roles.

The third study “What and how much math elementary school students learn, with the Singapore method: An evaluation of impact and incidental factors on learning, with an emphasis on the gender gap.” by Lorena Espinoza, Claudia Matus, Joaquim Barbe, Jennypher Fuentes and Felipe Márquez, presents a mixed-methods implementation study and impact evaluation of the text “Think without Limits” based on the Singapore Teaching Method of Mathematics (STMM), in the context of an educational consulting program developed by the Felix Center Klein of the University of Santiago de Chile. The results of this study show that the texts have high degrees of coverage, consistency and coherence with the math national curriculum. In addition, this study presents a positive impact on the learning achievement of 4th graders using STMM compared to similar students using other learning methods and a significant reduction of the gender gap in STMM students. Finally, this article presents change resistance among teachers as the main challenge in implementing the teaching paradigm that this method supposes.

The three studies presented above, supported financially by the National Education Council (CNED) through its Call for Research Support in Education 2015, approach from different perspectives and levels, a key issue in our educational system: learning gaps, more specifically, the gender gap in math. This issue has been present in the public agenda. The Trends in International Mathematics and Science Study (TIMSS) test scores released a few weeks ago indicated that in the 8th grade Chile presents the greatest gender gap in math among all participating countries and the second largest in science

after Hungary¹. By supporting these studies and the publication of their articles, the CNED seeks to contribute to the debate and provide evidence to stakeholders interested in closing these gaps.

The fourth study included in this issue of *Calidad en Educación* also addresses a relevant topic on the national public agenda: the integration of migrant children in our schools. This research - also supported by the CNED Call for Research Support in Education 2015 - “School Access and Choice among Migrant Families in Chile: “I had no problems because the school is open, accepting many nationalities” by Sara Joiko and Alba Vásquez. This research explored how choosing a school can be a form of inclusion in both the educational system and the broader society, based on the idea that schools can be potential sites for both social exclusion and inclusion. Considering secondary data, this article contextualizes migration and education in Chile and then uses qualitative methods, focusing on migrant parents in both public and publicly-subsidized private schools located in the Metropolitan Region, Tarapacá and Antofagasta. The study emphasizes that school choice and access to education concern both migrant families and other actors; and there is a transversal discourse on the need to improve the coexistence among communities and to guarantee the right to education that is often violated by the outdated institutional structure. The authors also suggest that in order to advance towards an inclusive and intercultural system, the relationship between family and school must be strengthened, the concept of interculturality within schools and in society must be expanded, and the concept of inclusion and its relationship with interculturality must be further explored.

Also related to the topic of school choice, *Calidad en Educación* presents the fifth study of this issue: “Choice system in Chile: determinants of school switching” by Catalina Canals, who analyzed the effects of competition (considering variables such as number of schools, number of schools within a given area, share of the local market) and change in school characteristics (changes in the average

1 <http://www.agenciaeducacion.cl/uncategorized/timss-2015-revela-alza-significativa-de-resultados-en-matematica-8-basico/>

of standardized test scores, pricing, or sex-segregation, that may have resulted in the switching of schools in Chile between the years 2005 and 2012. This research constructed a database of the publicly-subsidized private schools and public schools in Chile from 2005 and 2012 using the Ministry of Education data set and defined different models by level of education, controlling for variables such as type of school, rurality, and socioeconomic status. The results support the theory that changes of certain school characteristics do lead to school switching; however changes in sex-segregation policies found no effects. Changes in pricing did effect school choice among the participants in the sample, though this finding cannot be generalized to other cases. Only changes in SIMCE scores were determined to be associated with increases in the percentage of students switching schools. On the other hand, no evidence was found that local competition among schools affects that trend.

The sixth article of this issue is also very relevant to the CNED, since it is directly related to the National System of Quality Assurance in Education (SNAC), specifically in regards to the external evaluation that provides information directly to schools for their own improvement. The study “Data use and school improvement: understanding the meanings and practices underlying educational decision-making processes” by Victoria Parra and Gladys Matus was supported by the CNED 2015 Call for Research. The researchers put the concept of reflective data use into practice, considering school-based initiatives as well as staff competencies in their analysis which empirically contrasted four public schools in the Metropolitan Region of Chile. The results show how schools develop strategies to process, analyze and use information based on what has been delivered by the Educational Quality Agency; identify factors that condition school behavior and explore the extent to which school staff valued and understood information provided by the Agency. The study shows a SNAC with a strong orientation towards accountability that influences how the school staff interprets the information provided by the Agency.

The study “Perceptions about the teacher hiring process in Chile: critical aspects and inequity in the system”, by María Soledad

Ortúzar, Pamela Ayala, Carolina Flores and Carolina Milesi, is based on interviews with principals and academic supervisors from 32 Metropolitan Region recruitment units. This study characterizes the teacher-recruiting process, considering the practices and preferences of schools from varied socioeconomic status and type. The results show differences in recruitment processes; although it did identify general standards that inform hiring decisions. In addition this research identifies critical factors for principals and academic supervisors, such as management autonomy, staff rotation rates, the stages that differentiate different types of schools, teacher selection and hiring procedures. This study highlights the general difficulty of attracting and hiring teachers, especially those considered to be “good”. According to those in charge of hiring, private schools attract the best teachers mainly through their ability to pay high salaries.

Finally, this issue ends with the article “Selection of high school modality and its role in applying to the CRUCH universities” by Ximena Catalan. This study contributes to a better understanding of the educational trajectories of the students in vocational education at the secondary level focusing on two main areas: the preference for this type of education at the secondary level and the future choice of these students to apply to a university. In order to analyze the factors influencing preferences in type of education; this study hinges on previous research “Parents and school choice: Family strategies, segregation and school policies in Chilean and Finnish primary schooling, PASC Survey, 2011” and DEMRE data bases for applications to CRUCH universities. The results associate the choice of school type at secondary level to socioeconomic status and school alternatives at the district level. The results associate the choice of school type at secondary level to socioeconomic status and school alternatives at the district level; furthermore, students in vocational education at the secondary level are less likely to apply to CRUCH universities.

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