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Artículo 101

EDUCATIONAL RESEARCH IN VENEZUELA: A MULTIFACTORIAL ANALYSIS OF ITS DECLINE AND POSSIBLE PLAN OF ACTION

LA INVESTIGACIÓN EDUCATIVA EN VENEZUELA: UN ANÁLISIS MULTIFACTORIAL DE SU DECLIVE Y UN PLAN DE ACCIÓN PROPUESTO

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Abstract

Educational research is a fundamental tool for understanding and transforming educational realities. In Venezuela, however, this field has experienced a significant decline. This paper presents a documentary analysis of the key factors behind this decline from the origins of educational research in the country up to 2015. The findings identify that a weak research culture, inefficient economic management despite substantial investment, and educational policies subject to political and oil revenue fluctuations have critically hindered the development and impact of educational research. Based on this diagnosis, an action plan is proposed, structured around the tools of financing, regulation, and support services (Levin, 2010), to strengthen research capacity and its relevance to national needs.

Keywords: educational research, Venezuela, research decline, science policy, educational financing, action plan.

Resumen

La investigación educativa es una herramienta fundamental para comprender y transformar las realidades educativas. Sin embargo, en Venezuela, este ámbito ha experimentado un declive significativo. El presente artículo presenta un análisis documental de los factores clave detrás de este descenso desde los orígenes de la investigación educativa en el país hasta 2015. Los hallazgos identifican que una cultura investigativa débil, una gestión económica ineficiente a pesar de inversiones sustanciales y políticas educativas sujetas a la fluctuación de los ingresos petroleros y los cambios políticos, han obstaculizado críticamente el desarrollo y el impacto de la investigación educativa. A partir de este diagnóstico, se propone un plan de acción estructurado alrededor de las herramientas de financiamiento, regulación y servicios de apoyo (Levin, 2010), con el objetivo de fortalecer la capacidad investigativa y su pertinencia para las necesidades nacionales.

Palabras clave: investigación educativa, Venezuela, declive investigativo, política científica, financiamiento educativo, plan de acción.

Introduction

Societies are used to linking a single factor or a unique sector for the favorable or unfavorable results in any area, ignoring that human reality and therefore social in truth turn out to be more complex and works (or fails) due to the joint work of these multiple factors or sectors. If the results are excellent or not as expected, the successes and failures of each component must be analyzed and evaluated.

Educational research does not escape from this fact. Let us remember that the purpose of educational research is to interpret and understand educational phenomena. Therefore, its value lies in the importance of research as a powerful tool for transforming realities and informing decision-making in the contexts where educational centers and other institutions that benefit from them are located. Even recognizing its importance, in many countries around the world, its value is not visible, tending to decline. Venezuela´s case is not that far from this context.

The following paper presents a documentary review of the issue, analyzing key factors contributing to the decline of research education in Venezuela from its origins to 2015. The main findings reveal that culture, economic management, and educational policies had unfavorable results for educational research in Venezuela, bringing it to critical levels in comparison with other countries on the continent.

Conceptual foundations of the educational-scientific nexus

To evaluate the current state of educational research in Venezuela, it is necessary to establish a conceptual triad that defines the boundaries of inquiry, the nature of education, and the specialized field that emerges from their intersection.

Research: the systematic pursuit of knowledge:

Scientific research is defined by the OECD (2015, p.44) as "*creative and systematic work undertaken in order to increase the stock of knowledge ";* it is characterized by a rigorous methodology that seeks to describe, explain, or predict phenomena through empirical evidence. In the social sphere, research is not merely a technical exercise but a cultural asset. According to Stenhouse (1981, p. 104), research is "systematic inquiry made public" implying that its value is realized only when it is shared and subjected to the scrutiny of a community, a process that is currently hindered in environments with a weakening research culture.

Education: a multidimensional human and social process:

Education it is conceptualized as a lifelong process of human development that enables individuals to participate effectively in their society (UNESCO, 2015); .it is also define as a fundamental human right and a public good that serves as the primary driver of development (UNESCO, 2015). However, from a critical perspective, as argued by Freire (1970, p. 81), education is a *"practice of freedom"* and a tool for social transformation. This duality highlights that any crisis in educational quality (such as a decline in research) is, in essence, a crisis in the nation's developmental potential.

Educational research: the bridge between theory and practice:

Educational research (ER) is the specialized field that applies the rigors of scientific inquiry to the complexities of the educational process (Mosteiro García & Porto Castro, 2017). It involves the study of teaching methods, learning processes, institutional management, and policy impact; therefore, it is also a discipline that provides evidence to solve problems and inform decision-making (Muñoz-Repiso, 2010). When ER declines, the link between scientific evidence and public policy is severed, leading to what Peña et al. (2021) describes as an "intuitive" rather than "scientific" management of education, which is susceptible to political fluctuations and inefficiency

Methodological approach: Reviewing the literature

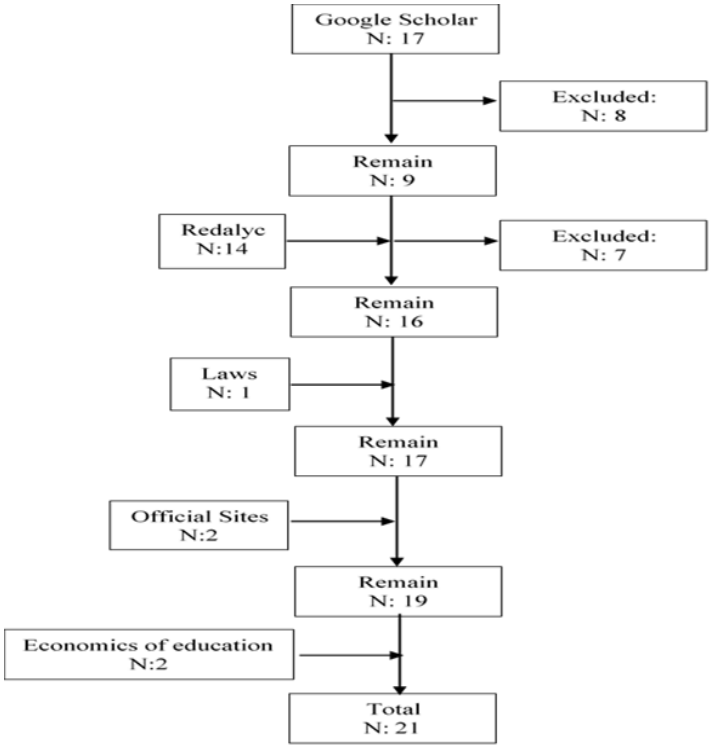
A brief literature review was conducted to understand the context of the educational research. The time covered for this revision was from 1960 to 2015. It included publications from Latin America, such as journals, official websites, as well as laws or regulations on the creation and publication of educational research in Venezuela. This examination allowed us to know the history, understand the general panorama, and explain why educational research is currently in decline in Venezuela. The keywords chosen were related to Educational Research, Scientific Research, History, Venezuela, and Cost-Benefit Analysis (the search for these words was performed in English and Spanish).

The search was mainly focused on Google Scholar and Redalyc (The Network of Scientific Journals of Latin America and the Caribbean, Spain, and Portugal). The following criteria were included:

- Papers should be included in journals with online publications.
- Papers with international perspectives should only include Latin American countries.
- Time Frame: publications must contain information up to 2015.
- The documents must be written in Spanish, English, or Portuguese.
- A total of 31 documents related to the topic were selected from this search, and 15 of them were excluded according to the following criteria:
- Journal publications on reflective or opinion essays.
- Irrelevance to the main topic.
- Repetitive Publications.

To these 16 remaining documents were added 5 references relevant to the research, which were: the constitution of the Bolivarian Republic of Venezuela, the official information of the Fonacit website, and the Instituto de *altos estudios del pensamiento del comandante supremo Hugo Rafael Chávez Frí*as, and two documents related to economics of education by Levin (2010, 2011) granted by the East China Normal University to explain how economics influences educational productions and how they are used to create public policies, giving a total of 21 documents that were used for the production of this document.

Figure 1: Search and review process



Source: Márquez, V. 2024

All the information obtained was classified into three thematic chronological categories, which briefly explain the origin of educational research in Venezuela and its decline. These categories are: a) educational research, a recent phenomenon in Venezuela, b) more investment does not always translate into more production, and c) education policies and their shortcomings for research.

Analytical categories

This section presents the findings from the literature review organized into three core analytical categories. These categories represent the key factors that the literature consistently identifies as central to understanding the trajectory of educational research in Venezuela. They are not isolated, but rather interconnected elements that collectively explain its development and subsequent decline. The key terms that frame this analysis are: research culture, referring to the institutional practices, values, and traditions that support scholarly inquiry (University of Edinburgh, 2024); educational investment and

efficiency, concerning the allocation and management of financial resources and their impact on research output (Levin, 2011; Zhang et al., 2024); and educational policy, encompassing the laws, regulations, and government initiatives that shape the research environment (Pita-Torres, 2020). The following categories—the recent nature of educational research in the region, the paradox of investment without production, and the shortcomings of policy frameworks—are examined through these lenses.

Educational research, a recent phenomenon in Venezuela.

Educational research as we know it was established in Latin America in the mid-20th century. In the previous century, this part of the continent made contributions to this area, but it was in the mid-20th century that it gained its institutional momentum (Murillo & Martínez-Garrido, 2019). Venezuela was no exception to this: educational research dates back approximately 60 years and is considered a recent phenomenon. The different research reviewed (Blanco, 2019; Martínez, n.d; Corona, 2015; Núñez Muñoz et al., 2007) reflected that the development of educational research in Venezuela went through three periods:

1. In the 1950s, the focus of educational research was planning, mainly oriented toward the study of the needs of the education system (monitoring and evaluation) (Blanco, 2019). By the 1960s, research was considered *"insufficient, disintegrated and bureaucratized"*
2. [1] (Blanco, 2019, p. 12) because the objectives of this research did not correspond with those of planning. Despite this, it was in this period that research units were created in the Ministry of Education and research was institutionalized (of course, in the service of planning).
3. By 1970, educational research began to focus on two aspects: the growth of the education system and the development of university studies; and its focus was centered on institutional dynamics in the classroom, as there was a deep concern among teachers about problems in the teaching-learning process. The use of natural science methods meant a problem for the social sciences because they did not have methods and

[1]Originally in Spanish: Insuficiente, desintegrada y burocratizada.

techniques appropriate to their reality and nature (Martínez, n.d; Blanco, 2019).

4. By the 1990s and the beginning of the 21st century, educational research focused on issues related to student achievement (in universities), university entrance, and competencies acquired by high school graduates. While this led to an increase in research and publications in universities, it did not guarantee that their effectiveness and relevance had been consolidated (Martínez, n.d; Corona, 2015; Núñez Muñoz et al., 2007).

Regarding the research institutions or centers created in the country during these three periods (and at present), it is important to note that they have remained mostly within the scope of the universities (private and public); However, in 1967 the National Council for Scientific and Technological Research (CONICIT) was created, which had research funding programs and scholarships for the training of researchers (Universidad Central de Venezuela, 2011); this council was replaced by the National Fund for Science, Technology and Innovation (FONACIT) created by Decree with the Force of Organic Law No. 1290 of 30 August 2011. No. 1290 of 30 August 2001, which is not attached to the Ministry of Education, but to the Ministry of Science and Technology (FONACIT, 2023).

The Organic Law of Science, Technology, and Innovation was created for *"the democratization of science and technology, which was also fundamentally reduced to an elite or some very small sectors"*[2] (Instituto de altos estudios del pensamiento del comandante supremo Hugo Rafael Chávez Frías, 2001), since by the 1980s, the high cost of university tuition represented a problem in higher education in the country.

From its implementation in Venezuela until the change from CONICIT to FONACIT, two problems of educational research in the country can be quickly

[2] Originally in Spanish: la democratización de la ciencia y la tecnología que también estaba reducida fundamentalmente a una elite o algunos sectores muy reducidos.

observed: the lack of research culture and its disconnection with society (Corona, 2015; Ramírez & Salcedo, 2016). Both have been present since its origins:

- The short time that educational research has existed in the country does not allow a culture around this phenomenon to be properly established. Although research began simultaneously throughout Latin America, Venezuela has undergone profound political and economic changes, which does not allow this research culture to take root (Requena, 2021)
- Ignorance of social science research methods produced results that were neither relevant nor applicable.
- Research approaches and topics were disconnected from the educational reality of the time.
- Despite its increase in the 1990s, its effectiveness and relevance remained poor.
- Research did not maintain its "autonomy" or continuity. With each change of government in the country, educational research was affected because: it became increasingly bureaucratized, it was still not considered as relevant as the technological sciences, its funding was restricted by neoliberal measures, and it was limited only to an "elite" that could access it (Morillo, 2007).
- With the change of government and system in 1999, the research culture that had been moderately successful in building up was radically changed. Although university education was now more accessible to all, the replacement of CONICIT put an end to the half-built base. The lack of research standards and the inevitable politicization of this did not allow (and has not allowed) the establishment of a research culture that has a real connection with society (Ramírez & Salcedo, 2016).

More investment does not always translate into more production.

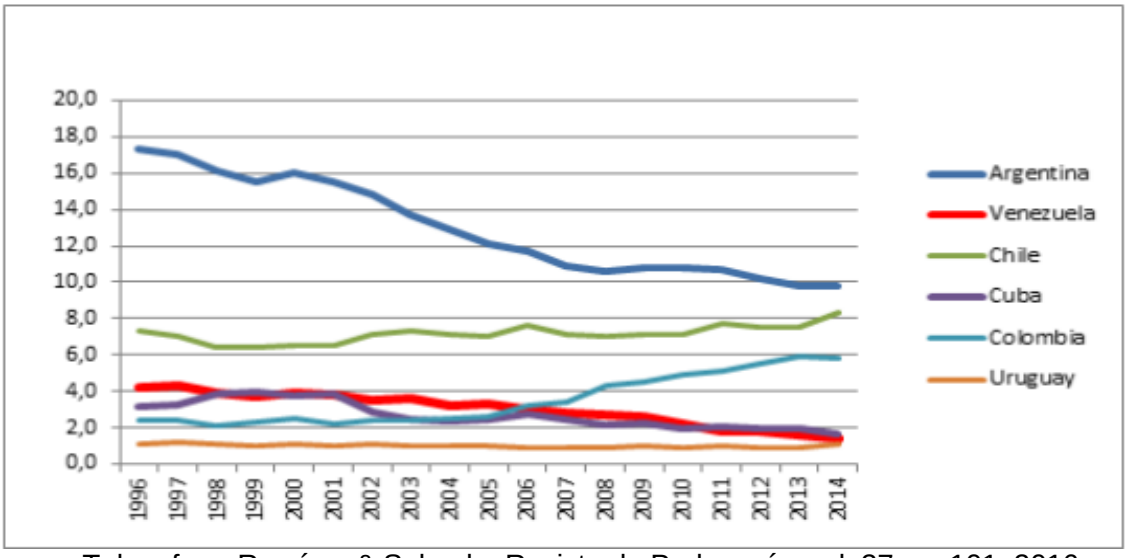
Another key factor in understanding the lack of educational research production in Venezuela is the economy. Morillo mentions that *"By the year 2005, one of the most important public social expenditures is education, along*

with health, housing, culture, science, and technology, representing 12.54% of GDP"[3] (Morillo, 2007, p. 232), although this helped to increase enrolment at all levels of education, the same did not occur for research production: Ramírez & Salcedo show us that by 2014, the production of scientific Papers in Latin America and the Caribbean (LAC) increased from 4.0% to 5.2% *"The countries with the highest growth were Colombia (244%), Ecuador (152%), Peru (134%) and Brazil (118%) and more moderately Argentina (34%) and Mexico (28%) while Venezuela decreased by 28%"*[4] (2016, p. 162). In addition to this, Ramírez & Salcedo (2016) also show a graph referring to the percentage of research and paper production in Latin America and the Caribbean from 1996 to 2014. What stands out in this graph is that the production of papers in Venezuela has been falling since 1996, and this fall is more visible from 2005, the year in which 12.54% of GDP was allocated to public social spending:

[3] Originally in Spanish: Para el año 2005 uno de los gastos públicos sociales de mayor consideración es el de educación, junto con salud, vivienda, cultura, ciencia y tecnología, por representar el 12,54% del PIB.

[4] Originally in Spanish: Los países con mayor crecimiento fueron Colombia (244%), Ecuador (152%), Perú (134%) y Brasil (118%) y de manera más moderada Argentina (34%) y México (28%) mientras que Venezuela disminuyó en un 28%.

Figure 2. Contribution (%) to total LAC production. 1996-2014



Source: Taken from Ramírez & Salcedo, Revista de Pedagogía, vol. 37, no 101, 2016, p. 163.

Based on the above, it can be assumed that, although the amount of capital invested in public and social spending (including university education) was considerable, it had no impact on research output, but **why is this the case?** This question can be answered chronologically:

1. In the last cost-benefit analysis carried out by the World Bank concerning the educational economy in Venezuela, it is noted that *"Higher education exhibits the lost returns among the three levels of education, mainly due to the high cost of university provision"* (Fiszbein and Psacharopoulos, 1993, p. 293); which is consistent with what was stated above: higher education was only for a privileged elite that could access it, therefore, research productions were not sufficient and had no connection with the educational problems to be addressed (Fiszbein and Psacharopoulos, 1993; Núñez Muñoz et al., 2007).
2. With the arrival of the new political system in the country and its radical changes in the institutions, higher education lost its “elitist” character by being “free”[5], however, according to the analysis carried out by Morillo

[5] Education in Venezuela has been free and compulsory since 1870. Between 1961 and 1999, democratic governments made education a priority, but other necessary measures were not taken, such as improving the quality of learning, decentralizing educational responsibilities, achieving school attendance that would overcome unequal conditions of access to educational services, incorporating new content into educational

(2007), the current system is not equitable, since it produces a bottleneck due to overcrowding and the permanence regime[6], preventing the entry of low-income and high-performing students. The results of these first two points can be explained by Levin (2011), who establishes that adequacy, efficiency, and equity are key when financing education: if costs are too high, equity and performance are lost; Levin (2010) who indicates that when education is fully managed by the government, equity is also lost because of the advantage that students with greater resources (concerning information and contacts) have; this in turn produces a loss in efficiency, as competition is lost.

3. Another issue presented by Morillo is *"the problem is not the resources but the efficient, honest and transparent use of them"*[7] (2007, p. 238). This is also explained by the same lack of research: if there is not enough data to know what the problems are and therefore the areas that need more funding or special plans and policies, the use of resources will be inefficient and will bring with it problems of bureaucracy and corruption.
4. In 2015, a study by Gonzáles, Chirinos, Farías, Olivero, and Boscán (2015) showed that the government invested 15.8 million dollars to strengthen research oriented towards social services (food, complementary energies, health, etc.). This fund served to sustain the insertion of the country's researchers, and, according to the Program to Stimulate Research and Innovation (PEII) and FONACIT, a positive level of awareness of the importance of research was achieved. However, the same study informed that: *"the significance assigned to the social impact of university research products that enjoy public or own funding has not been as expected"*[8] (Gonzáles et al., 2015, p. 307). The reason for this is the motivation of the researchers: they research what they want and not

programs (values, work culture, citizenship), and addressing the absence of a curriculum that linked schools to unmet social needs (Núñez Muñoz et al., 2007)

[6] Regulations of each university that regulate aspects such as the number of credits to be passed each academic year and the years available to complete the studies, etc.

[7] Originally in Spanish: el problema no son los recursos sino el uso eficiente, honesto y transparente de los mismos.

[8] Originally in Spanish: la significación asignada al impacto social propiciado por los productos de la investigación universitaria que gozan del financiamiento público o propio no ha sido el esperado.

> what they need. The purpose of research is based on self-interest and on achieving a goal (degree, postgraduate studies, etc.). In addition to this, institutions do not direct the few research projects to the areas where they should be applied; what they do with these productions is to lock them up in libraries. Thus, despite investment in education and research, there is a negative impact on the economy and the labor market because of the movements of the oil market and its influence on investment in education policies and the disconnection between research, market needs, and social problems; the skills and knowledge needed to succeed in a competitive economy are not being learned and generated.

Education policies and their shortcomings for research

Previously, it was mentioned that thanks to the creation of the Organic Law of Science, Technology, and Information in 2001, CONICIT was replaced by FONACIT, altering the little research culture in the country, but this has not been the only change, so **what laws have protected these changes and how have these policies impacted on the production of educational research in the country?** Firstly, there is the 1999 Constitution of the Bolivarian Republic of Venezuela, which states in Article 102 that:

> Education is a human right and a fundamental social duty; it is democratic, free, and compulsory. The State shall assume it as an undeniable function and of the utmost interest at all levels and in all forms (...) Education is a public service and is based on respect for all schools of thought...

The state is responsible for financing the entire educational process because it is sustained by the oil bonanza (the country's main source of income). The movement of oil revenues determines the government's education policies. The first decade of the 21st century, shows how this bonanza helped to create educational policies that gave promising results, such as the declaration of a territory free of illiteracy by UNESCO in 2005, the doubling of university enrolment, and the creation of the Bolivarian missions[9] (which helped to

[9] Social policies created to solve the problem of exclusion, mainly in the areas of education, employment, and health.

increase enrolment at all levels) (Castellano Agreda, 2011); however, universities did not do as well as other levels of education, and since universities did not do well, neither did research, especially in the area of social sciences and humanities.

In 2006, Misión Ciencia was created as a social program created to produce an immediate impact on the country's national science and technology system, in which the Ministry of Science and Technology was responsible for coordinating strategies to implement policies (coordinated with other ministries). This program, according to Rojas & Mora García (2019) was anchored to oil sales, so its budget was changeable (being higher than that of the Ministry of Science and Technology and the Ministry of Education). However, the program did not have the expected effects, according to García, Silva & Ramos De Francisco: *"This science plan did not fulfill its stated objective, as the intentionality of its purpose was distorted and attention was diverted towards particular interests derived from the revolutionary and proselytizing process"*[10] (2018, p. 195).

Regarding this last quote, it can only be confirmed that the **Misión** did not meet its objective, this confirmation is given by: the figures of Ricyt (2007) (Cited in García, Silva & Ramos De Francisco, 2018) which shows how there is an increase of researchers and specialists with masters or doctorates for the year 2006 and 2007 (which coincide with the first years of the Misión Ciencia) and then a drastic decrease of these for 2008 and 2009 especially in social sciences and humanities - which is also outlined in the research of Aguado & Becerril (2016) -. the research conducted by Van Noorden (2014, p. 202) for the journal *Nature*, in which he indicates that while South America has had a significant increase in research production, Venezuela is *"The only South American nation whose scientific output is declining: its publication tally fell by 29% between 2009 and 2013"*; and the research carried out by Blanco (2019) in which he compares the research productions of Venezuela and Colombia, highlighting how the

[10] Originally in Spanish: este plan de la ciencia no cumplió con el objetivo planteado, ya que se desvirtuaron la intencionalidad de su propósito y desviaron la atención hacia intereses particulares derivados del proceso revolucionario y proselitista.

policies of both countries have played a fundamental role in the advancement of scientific and humanistic research in Colombia and its regression in Venezuela.

Figure 3: Researchers and specialists with master's degrees and doctorates in the different areas of knowledge

	País	Titulados en:	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Total
Maestrías	Venezuela	Ciencias Naturales y Exactas	190	271	179	260	223	207	201	214	131	161	29	29	2095
	Venezuela	Ingeniería y Tecnología	129	160	194	221	252	222	350	365	391	330	40	40	2694
	Venezuela	Ciencias Médicas	42	27	18	23	53	37	71	51	87	69	6	6	490
	Venezuela	Ciencias Agrícolas	60	46	57	48	44	25	33	43	46	47	5	5	459
	Venezuela	Ciencias Sociales	181	314	508	580	580	816	911	977	1167	1294	31	31	7390
	Venezuela	Humanidades	434	707	905	851	956	852	855	662	859	1306	41	41	8469
	Venezuela	Sin Asignar						4	5	31	33	89			162
	Venezuela	Total	1036	1525	1861	1983	2108	2163	2426	2343	2714	3296	152	152	21759
	País	Titulados en:	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Total
Doctorados	Venezuela	Ciencias Naturales y Exactas	7	9	12	8	15	14	19	17	20	15	3	3	142
	Venezuela	Ingeniería y Tecnología	5	4	7	5	2	5	6	3	5	2	2	2	48
	Venezuela	Ciencias Médicas		1			1	13	4		5	2			26
	Venezuela	Ciencias Agrícolas				1									1
	Venezuela	Ciencias Sociales			9	27	38	63	68	88	69	79	3	3	447
	Venezuela	Humanidades	31	27	53	76	83	153	220	140	219	235	11	11	1259
	Venezuela	Sin Asignar	8	16	4	11		1		1		2			43
	Venezuela	Total	51	57	85	128	139	249	317	249	318	335	19	19	1966

Source: Taken from García, Silva y Ramos de Francisco, Revista Venezolana de Análisis de Coyuntura, vol. XXIV, núm. 1, 2018, p. 190.

Action plan

It is necessary to establish that educational research is a key element for the development and innovation of educational systems; however, the analysis carried out above shows us that in Venezuela, educational research faces multiple challenges, such as the lack of cultural establishment of the same, the poor management of the resources destined to promote it, the low political objectivity of the publications, the scarce diffusion, the low quality and the low incidence in public policies. Therefore, it is important to design and implement an action plan that encourages educational research in the country, in order to improve the quality and equity of education.

This action plan is based on the three tools for creating educational policies proposed by Levin (2010): financing, regulation and support services; consequently, the general objective of the plan will be to strengthen the capacity and culture of educational research in Venezuela through the strategic use of these tools, to create policies that are in line with political and citizen needs and interests. The specific objectives are:

- To increase, manage and diversify sources of funding for educational research.
- To establish quality standards and criteria for educational research.
- To provide support services for the training, dissemination and articulation of educational researchers.

These objectives should be achieved over the next 6 years, mainly in the universities, which are the most relevant institutions in the research area in Venezuela. The action plan is directed to the Ministry of Higher Education, the Ministry of Science, Technology and Innovation and in these first 6 years, it should be applied in the *Universidad Pedagógica Experimental Libertador del Estado Táchira* (UPEL), which is a pioneer in teacher training. A simple cost-benefit analysis should be carried out to determine the amount of investment. The following variables will be selected to examine the financial implications of the different options:

- Percentage of private companies involved: Instead of trying to make the public institutions bear all the expenses necessary for the research, a small group of private companies could be established that, based on their interests and national interests, could contribute to the research.
- Time of research: research that requires a large amount of time will mean higher costs for transportation, meals, even lodging in some circumstances, but will have better results, which is important for quality.
- Determine efficiency: working with a small to medium number of investigators (giving them full support for the work) is probably the most efficient way to achieve the objectives.

- Once the variables and their costs have been established, the application of Levin's (2010) tools is as follows:

1. Funding: this factor becomes a key instrument to promote educational research in Venezuela. As observed in the analysis, although the amount of the budget was sufficient, the constant movement of the country's oil reserves caused havoc in the area of research, so an adequate budget should be allocated for educational research that is not subject only to the oil bonanza. Funding can come equally from public and private entities, and a line for international funding and exchange should be created. In addition, shared funding will help scholarship and grant programs to foster educational research in Venezuela.
2. Regulations: Clear regulations must be established for educational research. The first thing that must be done is to build the foundation for a legal framework that promotes educational research and the protection of the rights of researchers, with which they can feel safe to publish objective opinions without any political overtones. Straightforward standards should also be established for educational research and the publication of results, an amount of funding should be established depending on the type of research, its level and time, so that research that requires less money does not get more than necessary, thus also avoiding corruption in educational funding.
3. Support services: these represent the third key instrument to promote educational research in Venezuela. Support services should be provided for educational researchers. This includes the creation of research centers that are managed between public or private entities, owned by third parties or international entities; the training of researchers; and the creation of research networks. In addition, mentoring programs should be established to help young researchers develop their skills.

UPEL Táchira acts as the social and academic laboratory where the effectiveness of the plan to strengthen the culture of educational research will be validated before its possible expansion to other institutions.

The university should adopt Levin's (2010) three tools to:

- Establish clear quality standards and criteria for research.
- Serve as a basis for the creation of research centers and collaborative networks.
- Implement mentoring programs for young researchers and continuous training.
- Manage and diversify funding sources (public, private, and international) for its research projects.

It is important to emphasize that it is necessary to know in depth the nation's GDP and how much monetary and human capital is needed to implement the action plan. A cost-effectiveness analysis must also be done to determine the budget needed for each year, and tables must also be created with the exact funds allocated for the aforementioned variables, which is why it is recommended that a multidisciplinary team conduct a thorough review for its application in the pilot university mentioned above.

The success of this action plan is based on its structural design, which replaces massive and inefficient spending with strategic management based on operational efficiency and the use of accurate data. The technical feasibility of the project is guaranteed by using UPEL Táchira as a pilot "social laboratory". This allows for the controlled validation of financing, regulatory, and support service tools before scaling up to the national level. Furthermore, the plan ensures its sustainability and credibility by breaking dependence on oil revenues through the incorporation of private and international partners. It also protects scientific integrity with a legal framework that shields researchers from politicization and establishes rigorous quality standards to prevent corruption. Finally, the requirement for a technical review by a multidisciplinary team ensures that the plan is not static, but rather adjusts to the economic realities of GDP and available human capital, exponentially increasing its chances of institutional success.

Final remarks

The analysis presented reveals that the decline of educational research in Venezuela is not the result of a single factor, but rather the consequence of a complex interaction between an incipient research culture, inefficient economic management, and volatile public policies. The fact that significant investment does not always result in scientific output indicates that the primary issue is not a lack of resources, but rather the absence of a strategic vision, policy continuity, and transparent mechanisms for implementation.

The historical divide between research and real social needs has led to a cycle of irrelevance, where research efforts fail to impact public policy or the solution of specific educational problems. The absence of a culture that places a high value on scientific evidence, when viewed in conjunction with the political manipulation of science and education, has had a detrimental effect on institutions that formerly demonstrated the potential to establish a strong research ecosystem.

In light of this scenario, the proposed action plan, underpinned by the pillars of funding, regulation, and support services, is not merely a technical recommendation but a necessary condition for reorienting the system. Implementing this change will require more than just additional resources; it will also necessitate a genuine commitment to university autonomy, meritocracy, and accountability. The future of educational research in Venezuela is contingent on the capacity of its stakeholders to learn from past missteps and collectively, in a non-partisan manner, establish a paradigm where knowledge is recognized as the pivotal catalyst for national advancement.

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