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CUBA

FROM A REGIONAL PERSPECTIVE ON THE FUTURE OF HIGHER EDUCATION

CUBA DESDE UNA PERSPECTIVA REGIONAL SOBRE EL FUTURO DE LA EDUCACIÓN SUPERIOR

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ABSTRACT

International cooperation and articulation of intergovernmental initiatives in favor of higher education require better synergy, definition of strategies and the establishment of links with networks and platforms devoted to the management of knowledge, science, technology and innovation regarding clear definitions of social responsibility of the institutions. Preparing higher education for the future, calls for a development agenda that ensures a lifelong assimilation of knowledge by means of relevant learning sites, in changing economies, and evolving work environments appropriate to each region. The objective of this paper is to reflect about Cuba from a regional perspective, specifically of Latin America and the Caribbean, and the necessary integration of higher education systems to face equity debts, low access and retention rates, as well as poor positioning of most universities of the Region and their impact on levels of development.

Keywords: cooperation, internationalization, regional integration, networks.

RESUMEN

La cooperación internacional y articulación de iniciativas intergubernamentales en favor de la educación superior, requiere de mejores sinergias, definición de estrategias y vínculos con redes y plataformas de gestión del conocimiento, la ciencia, la tecnología y la innovación sobre claras definiciones de responsabilidad social de las instituciones. La preparación de la educación superior para el futuro reclama una agenda de desarrollo, que asegure el aprendizaje a lo largo de toda la vida con sitios de aprendizaje relevantes, en economías cambiantes, y entornos laborales en evolución adecuada a cada región. El objetivo del presente trabajo es reflexionar sobre Cuba desde la perspectiva regional de América Latina y el Caribe, y la necesaria integración de los sistemas de educación superior para enfrentar las deudas de equidad, las bajas tasas de acceso y de retención, así como el mal posicionamiento de la mayoría de las universidades de la Región y su impacto en los niveles de desarrollo.

Palabras claves: cooperación, internacionalización, integración regional, redes.

INTRODUCTION

Proposing and updating the strategic policies of higher education in order to anticipate the university of tomorrow, are considered to be mandatory guidelines for a future where the quality and relevance of academic programs and scientific research have the goal of training integral graduates who will contribute not only to the economy, but also to a more just society, a healthy and appropriate life and to the protection of natural resources.

The next generation of students, their profiles and needs call for a decisive role from teachers and their new skills so that graduates are up to the challenge of facing the future in a context of accentuated globalization.

In a paper published by (Mojica & López, 2015), it is referred that uncertainty and complexity, are scenarios for trends that will determine higher education in the coming years where demographic changes, the expansion of the middle classes and consumption, the scarcity of resources, climate change, global governance, economic globalization, citizen empowerment, the overloading of knowledge and technological convergence are determining factors. Also, unexpected high impact events such as climatic phenomena, and pandemics, widely demonstrated with COVID19.

The overloading of knowledge in a framework of technological convergence has a significant impact with internet as the center of the transformations and an immeasurable power of social networks with the increasingly decisive use of digital and virtual resources in the economy and society. Globalization has also introduced information and communication technologies (ICTs), forcing Higher Education Institutions to break down their national borders as it happened with trade, capital, goods and services.

In the presentation of the second World Conference on Higher Education published in the journal *University World* in 2009, it is stated:

The past decade has shown that higher education and research contribute to poverty eradication, sustainable development and the achievement of internationally agreed development goals, including the Millennium Development Goals (MDGs) and Education for All (EFA). The global education agenda must reflect on these realities. (UNESCO, 2009).

The development of universities depends on a greater insertion in the internationalization of Higher Education (Saborido, 2020). The challenge is that on a global scale, the internationalization of higher education does not leave out any country.

For (Villavicencio, 2019), this important process is considered as:

Transversal that involves the entire university community intentionally integrating the international and intercultural dimension in the main functions of Higher Education with the aim of raising the academic and scientific quality of the Universities forming a professional with global competencies capable of contributing to the development and welfare of the society and its local environment, based on humanistic and solidarity principles.

The use of qualitative scientific methods of documentary review and behavioral observation, together with the historical and analytical method, allowed us to synthesize our own evaluations after studying the arguments presented by the considerations of the authors studied and referred to.

The objective of this paper is to reflect about Cuba from a regional perspective, specifically Latin America and the Caribbean, and the necessary integration of higher education systems to face equity debts, low access and retention rates, as well as the poor positioning of most universities of the Region and their impact on development levels.

DEVELOPMENT

The Internationalization of Higher Education in global agendas.

Since the last century, the higher education system has built working agendas that have resulted in declarations from the most diverse meetings and conferences, among them, the World Conferences on Higher Education held in recent decades. These Conferences do not have, as everyone knows, a normative definition so that their conclusions can be abided by the Associate States, they are only recommendations and agreements that are not always translated into legislation and action plans in the various Member States of UNESCO. (López, 2014).

The first World Conference on Higher Education (UNESCO, 1998), states the missions and functions of higher education and the vision and action for the 21st century are defined in a large document published in several publishers and electronic sites, stating that:

Emphasizing that higher education systems should enhance their capacity to live with uncertainty, to change and bring about change, and to address social needs and to promote solidarity and equity; they should preserve and exercise scientific rigour and originality, in a spirit of impartiality, as a basic prerequisite for attaining and sustaining an indispensable level of quality; and should place

students at the centre of their concerns, within a lifelong perspective, so as to allow their full integration into the global knowledge society of the coming century.

The above-mentioned declaration defines that theoretical and practical knowledge should be pooled among countries and continents considering:

- a) The principle of solidarity and genuine partnership among higher education institutions worldwide is essential for education and training in all fields to go some of the way towards understanding global problems, the role of democratic governance and qualified human resources, and the need to live together with different cultures and values. The practice of multilingualism, faculty and student exchange programs, and the establishment of institutional links to promote intellectual and scientific cooperation should be an integral part of all higher education systems.
- b) The principles of international cooperation based on solidarity, recognition and mutual support, a genuine partnership that equitably favors all concerned parties, and the importance of pooling procedural and declarative knowledge at the international level should manage the relations between higher education institutions in developed and developing countries, particularly for the benefit of the least developed countries. They should be taken into account for the need to protect institutional capacities in higher education in regions in conflict situations or subject to natural disasters. The international dimension should therefore be present in curricula and in the teaching and learning processes.
- c) Regional and international normative instruments related to the recognition of studies, including those concerning the recognition of knowledge, competencies and skills of graduates, should be ratified and implemented in order to enable students to change courses easier and to increase mobility within and between national systems. (UNESCO, 1998).

In this conference, the importance of studying and taking into account the diversification of educational models to meet the demands of cultural, social, economic and political development, and to provide students with the foundations and consolidation of the skills needed to enter the 21st century was also stressed.

At the second World Conference (UNESCO, 2009), internationalization, regionalization and globalization were discussed in greater detail. In an interview with A. Didriksson Takayanagui, a recognized expert in higher education, during the Conference, he said:

The same things continue to be repeated, the same concepts, no progress are made and, above all, no action is taken. For ten years now, the reflections have not been

accompanied, as shown by some participants, with concrete actions by UNESCO. For this reason, one of the topics that we put forward and that we want to emphasize from the region of Latin America and the Caribbean, is the adoption of norms, government actions and very strong recommendations around social responsibility, Relevance and a new international cooperation that seeks balance between the regions to avoid the great gaps that we still suffer. (López, 2012).

The Declaration of the aforementioned Conference focuses on internationalization, regionalization and globalization in ten of its articles:

1. Higher education institutions worldwide have the social responsibility to break through the development gap between countries by increasing the transference of knowledge across borders, especially to developing countries. They must also work to find common solutions to promote intellectual mobility and ease the negative effects of the brain drain.
2. International University networks and Associations are part of this solution, as they help to improve mutual understanding and generate a culture of peace.
3. For the globalization of Higher Education to benefit all, it is vital to ensure equity in access and success of educational processes; to this end, education must promote respect for cultural diversity as well as national sovereignty.
4. Globalization has emphasized the need to establish national systems of accreditation and quality assurance, as well as to promote integration through networking.
5. Cross-border provision of higher education services can make a significant contribution to higher education by offering quality education that promotes academic values, relevance, and respect for the basic principles of dialogue and cooperation, as well as mutual recognition and respect for human rights, diversity, and national sovereignty.
6. Cross-border higher education can also create opportunities for higher education providers to provide fraudulent and low-quality services; these factors must be countered. Providers who mass-train and graduate wholesale are a serious problem. Combating "degree mills" requires multiple efforts at the national and international levels.
7. International cooperation in higher education must be based on the principles of solidarity, mutual respect, the promotion of humanistic values and intercultural dialogue. This should be done despite the economic recession.

8. A new dynamic is transforming the landscape of higher education and research, calling for partnership and concerted action at national, regional and international levels to ensure the quality and sustainability of education systems worldwide, particularly in sub-Saharan Africa, small island developing states and other developing countries. This should incorporate South-South as well as North-South-South cooperation.
9. Research-focused partnerships, faculty and student exchanges promote international cooperation. The promotion of academic mobility, as a broader and more balanced basis, should be integrated into the mechanisms that guarantee true multilateral and multicultural collaboration.
10. Partnerships should foster knowledge-generating capacities in all countries involved and as a result to ensure diverse sources of assets necessary for high-quality research and knowledge production at regional and global scales.
11. It is needed a greater regional cooperation in areas such as appreciation of qualifications, quality assurance, governance, research and innovation. Higher education should reflect the international, regional and national dimensions in both teaching and research. (UNESCO, 2009)

Both Conferences held in Paris have been preceded by Regional Conferences as a space for exchange in the construction of a common position and unity from the region and as a preparation for the World Conferences.

The third World Conference is convened with an agenda that includes technology and innovation to promote collaboration, among others, topics such as international cooperation to enhance synergies, articulation of intergovernmental initiatives in favor of higher education, collaboration strategies of international donors and sponsors in higher education, networks, platforms and knowledge management for the progress of international cooperation, and the use of knowledge.

Higher education agendas in Latin America and the Caribbean.

Preceding the World Conferences, preparatory conferences have been held in each region, viz Asia and the Pacific, Africa, the European Region, the Arab Region and the Latin American and Caribbean Region.

The first Regional Conference of Latin America and the Caribbean (IESALC-UNESCO, 1996) was held in Havana, where it was agreed that higher education is an indispensable element for social progress, production, economic growth, the affirmation of cultural identity, the conservation

of social cohesion, the fight against poverty and the promotion of a culture of peace.

The second Regional Conference on Higher Education took place in Cartagena de Indias (IESALC-UNESCO, 2008). It ratified higher education as a social public good, a universal human right and a duty of the State, always at the service of the progress of our peoples.

The latest one was the third Regional Conference held in Cordova, Argentina (IESALC-UNESCO, 2018), prior to the third World Conference, where an agenda was defined which is enriched and contextualized in each country after facing the COVID19 pandemic, with enormous challenges in the region.

At the third Regional Conference on Higher Education, seven topics were defined of which four, are aimed at regional integration: higher education as a part of the education system in Latin America and the Caribbean, internationalization and regional integration, cross-cultural and cultural diversity and the strategic role of higher education in the sustainable development of the region.

At these conferences, it is essential to have a permanent exchange of best practices and concepts on higher education in the region on crucial issues such as undergraduate and graduate teaching, research, development programs in areas related to Latin American and Caribbean integration, sustainable development, intercultural studies, knowledge, heritage valuation and the study of contemporary social and natural phenomena.

It is important that higher education and university policies, reforms and laws take into account the new national and international realities and experiences and the simplification and flexibility of norms. It is paramount to adopt international governance systems based on projects with strategic priorities that imply full accountability to society and adequate management of human, material and financial resources.

In developing countries, it is essential to adapt relevant global knowledge to a local agenda that establishes priorities and creates capacities that produce socially relevant research with economic impact. The current state of the university in the region calls for mobilizing the capacities created, in integration with society, government and local actors.

Innovation in teaching methods, didactics of learning and research involves creating networks, focused on global and local needs simultaneously, that focus development to achieve sustainable development objectives, with particular emphasis on multiculturalism and diversity. The use of hybrid teaching-learning models requiring the adjustment

of regulations, which in the new normality, as the period after the COVID19 pandemic has been called, is very important in the organization of university processes.

Regulations, entrance examinations for university studies, academic positions and organizational structures, as well as the powers and responsibilities of university authorities must be flexible enough and appropriate to the environment, providing the necessary autonomy to universities, along with the corresponding social responsibility.

The new models of governance with articulated management between the government and scientists, experts and technicians, provide the necessary synergies for the transformations imposed on study plans, programs and curricula, as well as on the teaching-learning process, evaluation systems, digitalization of contents, and the use of virtual learning platforms and distance and blended learning education, together with the most diverse modalities of the teaching process, didactic and pedagogical innovation.

It is indispensable to develop student and faculty mobility programs with universities recognized worldwide and with others of high quality, as well as the creation of dually qualified programs that offer incentives to teachers and social recognition in the university environment. This should encourage them to remain in the academic career and participate in improvement programs by accessing higher teaching categories and dedicating themselves full time to the academic career, although with strong links to society.

Guaranteeing inclusive, equitable and quality education is one of the foundations for the necessary social and economic change. The development of competencies that enable the region, its countries and citizens to act with relevance in complex scenarios and to effectively insert themselves into a global knowledge-based dynamic requires changes in education systems and institutions that consider cooperation, the solidary construction of knowledge and the transfer of resources between regions, countries and institutions.

The circulation and appropriation of knowledge as a strategic social good, in favor of the sustainable development of the region and its countries, requires internationalization as a corner stone for transforming higher education, strengthening its communities and promoting the quality and relevance of teaching, research and extension which will have an impact on the formation of citizens and professionals, respectful of cultural diversity, committed to the culture of peace and with the capacity to live and work in a local and global community. "Innovative inter- and trans-disciplinary approaches to research are also important means to generate discourse that advances pluralistic,

diverse, de-colonial and social justice efforts, and broadens our cross-cultural understandings and knowledge in order to address emerging societal changes and challenges." (Robson & Wihlborg, 2019).

Higher education evaluation and accreditation systems and their quality standards and assurance procedures must provide dynamic interrelationships in the functions of teaching, extension and research. Increasing the visibility, relevance and status of institutions should help to stop the brain drain and promote the training of qualified human resources, with recognized postgraduate programs, reinforcing training activities, particularly in strategic areas and indigenous knowledge that can be incorporated into the scientific problems of the countries.

Joint research projects with universities of excellence and through departments and networks, the creation of scientific and technological grounds, business incubators and business interfaces, are crucial to obtain funding and add knowledge for research, together with innovations with local, national and international impact.

Transparent intellectual property and copyright policies should be adopted to stimulate researchers and provide a balance between social development and economic growth. Likewise, professors and researchers dedicated to research and innovation should have more opportunities for increasing the training of masters and doctors to guarantee excellence in research.

In the rankings that privilege indicators for funding and donations, number of Nobel Prizes, citations in referenced journals and other similar indicators, most universities in the region are not always in good positions, despite achieving international excellence in many cases and responding to the demand for national training needs with programs of excellence, where network cooperation is essential to take advantage of existing potential.

Most Latin American universities are distant from the best places in the rankings of the best universities worldwide; the first places are monopolized by Anglo-Saxon universities and those from the developed world. In indicators of Science and Technology and patent invention the region is lagging behind, only Africa and the poorest areas of Asia are in a worse situation (López, 2014).

It is important the use of regular accountability mechanisms at all levels and an increasingly dynamic and deep interaction with different social sectors, on comprehensive training and innovative vocation, critical thinking, dialogue on the culture of sustainable development and environmental protection.

Added to the challenges of inequity are access and external evaluation and accreditation processes, the virtuality of teaching in the midst of the necessary transdisciplinary creation and the essential university-industry-government link in the productive and service sectors.

Public policies are needed to support the internationalization process by establishing organizational frameworks that ease regional academic integration, student and academic mobility, recognition of international educational paths, the international dimension of academic programs and international collaboration in research, among others. "To bring about systemic change in the internationalisation of HE, the ways we conceptualize 'excellent' and 'world class' knowledge, research and teaching need to be reconsidered through a more holistic, cross-disciplinary and transversal." (Wihlborg & Robson, 2017)

Internationalization should promote inter-institutional cooperation based on solidarity among equals, with emphasis on South-South cooperation and regional integration, promoting intercultural dialogue, respecting the peculiarities and identity of the participating countries, encouraging the organization of inter-university networks and the strengthening of national capacities through inter-institutional collaboration and interaction on a regional and international scale. "It is critical that internationalization strategies also specifically include a focus on university social responsibility". (Jones et al., 2021).

To strengthen cooperation and integration in the region, alliances are required for the development of scientific-technological activity, the creation of promotion funds is justified, the construction of strategic projects and defining priorities, so that the complementation of efforts is favored by the scientific quality of the institutions and their researchers.

"Cuba will also continue sharing its experiences with other nations through South-South Cooperation, and betting on a renewed and strengthened multilateralism, on solidarity cooperation and the search for global solutions to common problems." (Díaz-Canel, 2021b).

The history and the progress achieved in the field of cooperation have made our Higher Education Institutions actors with a vocation for regional integration, where native cultures have a leading role. There are still inequalities despite the development of international cooperation and the worldwide consensus on the importance of higher education.

The constitution of academic networks and joint research projects must integrate and share scientific and cultural potentialities, as well as make proposals to governments

for solutions to face strategic problems that depend on joint efforts.

Many of the problems require articulating local and regional strengths and identities, and developing actions that collaborate in overcoming the strong irregularities that prevail in the region and in the world, in the face of the global phenomenon of the internationalization of Higher Education. In this articulation, the spaces for regional and global coordination and the agreements that ensure a platform of operations, where each country contributes its good practices and takes advantage of the achievements, strengths and opportunities of others, are decisive.

Networks, associations, and other spaces for international coordination in the region. Degree recognition agreements.

The collaborations established through international university links must go with institutional and national policies and strategies that contribute to making internationalization a cross-cutting issue in university processes.

The growing process of internationalization of higher education has catalyzed the creation of associations of universities, conferences of rectors, academic and scientific networks and other spaces for international coordination that add value to cooperation and, consequently, to its effectiveness and impact. These spaces have facilitated the realization of international projects that enhance scientific development, innovation and university teaching. All this requires and facilitates an increase in international links between institutions, professors, researchers and students.

These interrelationships have a decisive impact, not only on the specialization and training of university staff, but also on allowing for the optimization of resources through the generation of new capacities, programs and innovative scientific research projects, developed on the basis of common interests and with multipurpose impacts.

There is no doubt that participation in thematic networks and affiliation to international associations is an effective instrument for establishing cooperation, identifying common points, strengthening trust among institutions, developing international projects in areas of mutual interest, consolidating trust among participants and favoring the acquisition of funding. They also help to promote agreements for the recognition of studies and to plan actions leading to greater development of higher education institutions.

Although there are a large number of internationally recognized associations and networks in Latin America and the Caribbean, the irregularities existing in the region

cannot be ignored. Such differences sometimes constitute obstacles to the achievement of the necessary regional integration for the benefit of higher education, limiting the full utilization of common strengths that exist from the historical, cultural, scientific, academic and linguistic points of view.

The associations that foster regional integration and international cooperation have played an important role in the implementation of shared strategies to effectively respond to the actions agreed upon at the Regional Conference on Higher Education in 2018. However, the results obtained and the actions deployed by governments, institutions and organizations to improve the quality, relevance and equity of higher education in Latin America and the Caribbean are still insufficient. The available sources of financing are also scarce.

In this regard, in recent years the role of the Latin American Higher Education Area (ENLACES) has been strengthened, which has contributed to establishing new alliances among the region's higher education systems and to achieving unity and common positions in the midst of diversity. Cuba has been a member of ENLACES since its inception and has maintained an active exchange with all the associations that are part of this network in the region.

Several Cuban higher education institutions are full members of the most recognized associations at the regional level. It is noteworthy the participation in the Union of Universities of Latin America and the Caribbean of which six Cuban universities are members. Close relations are maintained with the Association of Universities of the Montevideo Group, the Central American Higher University Council, the National Association of Universities and Institutions of Higher Education of Mexico, the National Council of Universities of Nicaragua, the National Association of Leaders of Federal Higher Education Institutions of Brazil, the Association of Universities and Research Institutes of the Caribbean and the Regional Conference of Rectors, Presidents and Directors of University Institutions.

Other international spaces with which Cuba has important strategic links in the sphere of higher education that go beyond the Latin American and Caribbean region are the Ibero-American General Secretariat; the Ibero-American University Council; the Organization of Ibero-American States; the Francophone University Agency, the Conferences of Rectors of universities in Spain, France, Italy, Portugal, Germany, Russia and others in the European framework.

The strategies developed with these associations have focused on such pressing issues as access and equity;

quality and accreditation of higher education institutions and study programs; academic and student mobility; R+D+I processes; the university-society link; university internationalization and the digital transformation of higher education.

Higher education institutions in Cuba are part of more than 350 international spaces, some of a markedly scientific or academic nature and others of greater influence in university management. Increasing participation in these regional and global spaces is a challenge that requires strategies that stimulate exchange and legal instruments that favor the recognition of studies and trust between institutions.

One of the fundamental problems that affect the development of integration processes in higher education between countries and universities in the region is the insufficient mutual recognition of studies. This limits the possibilities of joint actions both in teaching and in the international exercise of the profession and student mobility. One of the most important institutional lines of action in the field of internationalization is to achieve reciprocal recognition of university degrees by a greater number of countries on the basis of agreed norms and quality standards. The Latin American and Caribbean region has been very limited in this.

To achieve this objective, greater understanding is needed among governments, higher education institutions and other actors involved in the processes of mutual recognition of undergraduate and graduate studies. In the last five years, under the leadership of the Institute of Higher Education for Latin America and the Caribbean, the proposal for a Regional Agreement on the Recognition of Studies, Diplomas and Degrees in Higher Education in Latin America and the Caribbean has been articulated in the Latin American and Caribbean region, and Cuba is a signatory and supports.

At the same time, the World Convention on the Recognition of Qualifications concerning Higher Education sponsored by UNESCO has also been agreed upon, which constitutes an important instrument to intensify inter-regional academic mobility, promote greater international cooperation, the democratization of higher education and lifelong learning opportunities for all, establishing a regulatory framework for the preservation of the quality of higher education. In this sense, Cuba maintains an active participation in the fulfillment of the precepts approved by the Member States of UNESCO.

The ratification of these agreements by the different governments will facilitate the synergy in the teaching-learning processes and will expand the possibilities of accessing

jobs in countries other than the one issuing the degree. At the same time, it will broaden the spectrum of opportunities to participate in research and postgraduate projects in any of the countries signing the agreements, with the guarantee of recognition of the degrees issued by higher education institutions, governments and other social actors.

Exchanges in networks, projects, congresses, workshops and meetings in Latin American and Caribbean spaces and others in Ibero-America, North America and Europe, including some spaces in Asia and Africa, are an ideal scenario for sharing, learning and ensuring joint work agendas in projects and academic and scientific collaboration and products and services of cross-border and multidisciplinary visibility and impact. (España. Fundación Carolina, 2021).

Latin American and Caribbean integration in times of COVID19.

The pandemic has created scenarios that have no precedent in more than four and a half centuries of higher education in the region. The new contexts call for combining the coexistence of virtual and face-to-face spaces and ensuring connectivity and digital transformation together with the adequate preparation of teachers for technology and the use of digital resources with the protection of knowledge and the use of science and innovation as an intrinsic commitment to each process. Access and equity are a challenge for higher education, particularly in the most economically disadvantaged areas.

No university was prepared to face the COVID pandemic, the university has traditionally been face to-face, and was not ready to move to virtuality in a total way, although all had certain strengths that allowed them to make a transition to remote education relatively quickly and take distance courses with the active participation of professors from virtuality and the assembly of content on interactive platforms available.

Providing all its lessons virtually was not in the plans and programs, to foresee it and ensure it would take years, but reality forced to take what was thought to over the years, in a few weeks. This was only possible because of the prepared human capital with the skills for successfully completing a challenge of this magnitude, without time for pilot tests.

Only the best universities in the world had the ideal virtual platforms to expand the academic offerings combining blended, virtual and in some cases face-to-face modalities with lower costs compared to the face-to-face modality, ranging between 20 and 30 percent. According to the

QS. World University Rankings (QS. TOPUNIVERSITIES, 2020), among the 10 best universities in the world, five are from the United States; four, British, and one, Switzerland; they all have virtual programs with international offerings and at MIT, Harvard, Cambridge, Oxford, among others, their average annual tuition is between 60,000 and 80,000 dollars, unattainable for the middle and lower strata.

It was necessary to build a scenario different from the usual one and to go through the firm commitment to maintain quality and excellence, thanks to the convergence of face-to-face and remote access, which must be perfected with didactic innovations, new evaluation methods and above all, with a greater link to social and productive practice in each case.

Many teachers and students have never had an educational experience at a distance and mediated by technology, it is a pedagogical challenge more than a technological one. A remote access class involves methods, tools and competencies that are very different from a face-to-face class.

Universities have set a great example of their social function and how to participate in problem solving. Countless volunteer and social care tasks in communities, hospitals and care centers have been faced. Some of them, linked to research groups reinforcing the preparation and participation in science.

In many universities students do not have equipment such as computers or tablets, do not have a suitable Internet connection or do not have either at home, which was the biggest problem faced, requiring some solutions, and we are still looking for other alternatives to ensure that no one is left behind by the difficulties of access to the Internet.

The model that combines work at home, presence and virtuality, has as a priority the protection of life and health, but the goal is to recover the presence with responsibility for what life in the university community means, social relations, sports, culture, and sharing in student organizations and in the university government.

In a study on higher education in Ibero-America in times of pandemic Impact and teaching responses of the Carolina Foundation, it is explicitly stated that:

Inevitably, the loss of social contact and socialization routines that are part of the daily experience of a higher education student will come at a cost. The isolation that is inevitably associated with confinement will have effects in terms of socio-emotional balance that will leave their mark, particularly on those students with pre-existing problems in this domain. For the most vulnerable students

who participate in remedial and support programs, isolation hits them even harder. (Fundación Carolina, 2021, p.28).

For teachers, there was also an important challenge in the updating and creation of skills so that the student, as an agent of knowledge, seeks and obtains pertinent and relevant information, processes diverse knowledge, investigates realities and accumulates learning. The reality that the teacher knew everything and that education was thematic and memoristic has been transformed; it is now about the teacher learning with the student to generate new knowledge based on projects, social-emotional skills, critical thinking and facilitating reasoning.

Virtuality has extended beyond the internal university process and has reached much higher limits in the exchange of networks, associations, councils, forums, congresses, workshops, courses and other modalities taking advantage of the wide diversity of virtual connection platforms available in the world, which has led to the sharing of experiences, knowledge, realities, and challenges along with the opportunities and strengths of each participating party.

A new vision of higher education in the future is required so as to define and prepare its roadmap for a new era of higher education systems and institutions considering the challenges facing humanity and the planet, as a result of the various forms of crisis, with special attention to the global disruption created by COVID -19. Higher education must anticipate the future, beyond the next decade.

Breaking away from traditional models of higher education and opening the doors to new, innovative, creative and visionary concepts that not only meet current agendas for sustainable development, but also pave the way for future learning communities that overcome barriers and ensures lifelong learning.

Greater interaction between higher education institutions and society and greater interaction with the different social actors with proposals for economic and social development have the great challenge of promoting transformations aimed at regional development with justice and social inclusion for all, especially in the region of great inequalities.

The university model that simultaneously integrates teaching and research calls for institutions that provide knowledge to young people in their initial preparation for life, acting with autonomy in the design and assembly of the wide variety of types of courses, teaching models and new programs, with the priority given in most countries to

degrees, which are intertwined in an orderly fashion with labor regulations.

The main challenge is to build a new university that can fulfill the social function that corresponds to it and that society expects from it, not only in terms of equity of access, but also in terms of knowledge and competencies, as well as solutions for sustainable, human and social development. A new model of university means that the production of knowledge should be accompanied by its application with an impact on the economy and society in terms of growth and social transformations.

The universities of the region and of Cuba in particular have shown signs of being able to face change and consider the recommendations of the World Conferences, the axes of debate and proposals of the Regional Conferences, as well as the experiences and conditions of each country, with the public policies and initiatives of networks and forums. (Alpízar, 2019)

Research and academic authorities, together with prominent academics, have been building new models of institutions, management, programs and projects in close ties with the productive sector of goods and services, research centers and financial institutions, among others.

Cuba and regional integration in the future of higher education

Article 73 of the Constitution of the Republic of Cuba (Asamblea Nacional del Poder Popular, 2019) declares as a right:

Education is a right of all persons and the responsibility of the state, which guarantees free, affordable and quality education services for comprehensive training, from early childhood to postgraduate university education.

The State, to make this right effective, establishes a broad system of educational institutions in all types and educational levels, which offer the possibility of studying at any stage of life according to aptitudes, social demands and development needs socio-economic of the country.

Likewise, Article 32 of the same Constitution, in the Fundamentals of Educational, Scientific and Cultural Policy, declares:

The State directs, encourages and promotes education, science and culture, in all its manifestations.

In its educational, scientific and cultural policy, the following postulates are taken into account:

a) It is based on the advances of science, creation, technology, innovation, thought and the Cuban

and universal progressive pedagogical tradition. (Asamblea Nacional del Poder Popular, 2019).

The Constitution of the Republic, the National Economic and Social Development Plan until 2030 and Cuba's foreign policy constitute driving forces for transformations in higher education and motivators for greater innovation in university processes, which increase the relevance and quality of the results that society expects from this sector and for its contribution to the Sustainable Development Goals of the 2030 Agenda.

In Cuba's national plan for economic and social development up to 2030, the vision of the nation is expressed and the axes and strategic sectors are defined as economic tools of socialist planning. The vision of the nation defines the course towards the society of the future and gives it a dynamic, proactive and transformative character.

In a national and international context that imposes the Covid19, and the crisis exacerbated by the intensification of the economic, commercial and financial blockade of the US government towards Cuba, it is important to consider in the current work agenda:

- a) The Agenda of the World Conference on Higher Education and the main lines of action of the Regional Conference on Higher Education 2018.
- b) Regional Conference on Higher Education 2018.
- c) The Government management system based on science and innovation (SGGCI).

About the Government Management System based on Science and Innovation according to its own author (Díaz-Canel, 2021a), it is worth highlighting the following:

It is a system of government work that seeks to strengthen the role of science and innovation in the search for creative solutions to problems that arise in the process of economic and social development of the country, both in the production of goods and services, as well as in the areas of public administration, STI activities, education, culture, or others. (p. 9)

The knowledge sector (KS) has great relevance in the SGCCI. Here KS is interpreted in the broadest possible sense, although universities, municipal university centers (in Spanish CUM) and science, technology and innovation entities, whose R&D&I projects and training programs, including high level ones, increasingly have to incorporate innovation, stand out in particular.

"Science and innovation as a pillar of government are linked to the other two pillars of government management: social communication and informatization, which contribute to the Vision of the Nation, sustainable development

and integrate the economic, social and environmental dimensions". (p.10)

In a work by the author himself together with Núñez Jover, they consider that:

The experience of confronting COVID-19 confirms the great opportunities offered by the close and interactive collaboration between scientists and the Government. This is a topic of interest for all countries. It is commonly assumed that the formulation and evaluation of public policies should always rely on expert knowledge. It is complex, however, to achieve this. It is not always possible to consolidate a fluid and mutually understandable communication between the academic world and the political decision makers (...) the relevance of considering innovation, informatization and social communication as pillars in the management of the Cuban Government is corroborated. (Díaz-Canel & Nuñez, 2020).

In correspondence with the above, the Cuban model of university implies:

A high level of integration with society, its productive sector, territories and communities; committed to the development of an advanced social project with harmonious integration of the economic, social, environmental and cultural vision of development, and the projection to an innovative university, with greater interdisciplinary integration and university processes of training, research and extension, with a high relevance in terms of inclusive sustainable development of our countries. (Saborido, 2020).

The current stage of the Cuban university has made it possible to mobilize the capacities created, in integration with society, government and local actors as a strength to face needs and employ new governance models with articulated management between government and scientists, experts and technicians, and synergies and systematic exchanges which led the Cuban government to consolidate its scientific and participatory style of government management with proven results.

The Ministry of Higher Education has identified some strategic guidelines for change for the 2022-2026 period, including:

- a) greater university-government linkage articulating the productive sector of goods and services to the government management system based on science and innovation, emphasizing strategic sectors, and creating new interface business organizational forms,
- b) advances in the development of the virtualization of training processes with improvements in didactics and transformations in the culture of the university community with emphasis on the virtual/digital platform

supported in the generation of capacities and competencies associated with ICTs on digital transformation strategies,

- c) the introduction of disruptive technologies and the computerization of processes, enhancing access to resources, services and contents, and introducing new and innovative pedagogical models and creative assimilation of new technologies,
- d) accompanying the elaboration, implementation, evaluation and updating of municipal and provincial development strategies, the design of local innovation systems and the elaboration of the training, capacity building and advisory system, according to the needs of the strategic management of territorial development,
- e) the alignment of innovation to productive transformation and the development of new activities, promoting the linkage and transfer of knowledge between companies, academia, universities, entrepreneurs and investors,
- f) the implementation of a training strategy aligned with the sustainable development of the country, which allows the generation of human capital capabilities, transversal competencies and new knowledge, ensuring the continuous training of professionals that articulates undergraduate, graduate and postgraduate training,
- g) the achievement of the National Network for Research and Education as a space to promote science and innovation and make visible the contents, services and resources that support the teaching and research process, with the capacity to reach the municipalities and the entire national and international academic and scientific community,
- h) the implementation of communication strategies to promote and position the quality of higher education training processes, scientific production and innovation among other cultural extension actions, increasing international visibility and improving positions in rankings and indexed journals,
- i) the strengthening of internationalization that contributes to the quality of training, science, technology and innovation processes and strategic objectives, in its articulation with the SGGCI, with greater academic and scientific exchange and participation in networks,
- j) the identification of integral cooperation development projects, as well as other innovative ways to attract resources, including foreign direct investment,
- k) the construction of projects, academic, scientific, technical and professional services of impact, attractive for foreign students to be motivated to receive them from Cuba, favoring Latin American and Caribbean integration,

- l) the application of management models that achieve better standards of efficiency, efficacy and effectiveness in the use of public expenditure.

According to Alpizar (2019) the changes occurred in higher education in Cuba are supported by public policies built over the years:

Successful public policies around the production, dissemination and use of knowledge in universities have as a basis, results in education and social indicators in general that make it possible for the network of actors involved in the formation, and generation and application of new knowledge to be activated and achieve the deployment of actions of education, improvement, training and scientific research in its widest extension to regions and localities with conditions created for this purpose.

The background and experience of strategic projects in the organization during the last three decades, have created a work culture that facilitates the design of objectives, strategies, actions, indicators and goals that allow the measurement of results in each period, consolidating a working tool that supports the improvement plans as results of the evaluation processes and forms a platform that responds to the dynamics of the territorial, national and international context imposed by development.

The current circumstances make it necessary to contextualize the strategic project to the demands of the internal and external environment, supporting the digital transformation of higher education, virtual mobility and improvements in quality, access and equity with relevant programs and research projects that respond to the Sustainable Development Goals. In the design, implementation and monitoring of this project, internationalization as a cross-cutting process that involves the entire university community is decisive, intentionally integrating the international and intercultural dimension in the main functions of higher education.

The internationalization process has been perfected in the organization and its institutions, which allows for a more coherent and harmonious insertion in the main trends that are developing in the university world. It is necessary to work intentionally on actions that lead to the internationalization of the curriculum, the internationalization of research and the internationalization of teacher training with greater coordination among the actors involved in this process.

The University congresses, held in Cuba every two years for more than twenty years, have contributed to enhance internationalization, due to the knowledge and experience shared in the academic and scientific sessions, and the possibilities they offer to identify niches and opportunities

that have materialized in scientific projects raising the quality of the research and training processes of higher education institutions, not only in Cuba but also in the rest of the participating countries.

The twelve editions of the International University Congress have had an average participation of 3000 foreign delegates from some 60 countries. The presence in each edition of some 15 Ministers of Education, 30 Presidents of Rectors' Associations, 40 high-level representatives of International Organizations and 300 Rectors has been significant. The exchange with these personalities has contributed to increase international links through the signing of ministerial and inter-university agreements that have materialized in joint research, technical assistance activities and other international actions. The countries most represented at this event have been: Mexico, Venezuela, Argentina, Brazil, Ecuador, Colombia, Angola, the United States, Spain, France and Mozambique. The Congress is an expression of the international recognition of Cuban higher education and has contributed to increase the international visibility of the scientific and academic results achieved by Cuba in the last 60 years.

CONCLUSIONS

The recommendations of the World Conferences on Higher Education are appropriate for governments to implement policies and define actions that favor the pertinence of university training and research, and consequently, the quality and excellence of knowledge and graduates. In addition, higher education institutions should promote the development, exchange and dissemination of knowledge, technical assistance and policy recommendations to contribute to the improvement of higher education capacities at the national, regional and international levels.

The adaptation of the recommendations to the conditions of each region, particularly the Latin American and Caribbean Region, is a necessary condition for the implementation of policies, the achievement of improvements in quality and to face the challenges of access, equity, and the generation of knowledge and competencies that have an impact on sustainable human and social development.

Latin American and Caribbean integration should favor the development and creation of competencies for the connection between academic knowledge, production, work and social life, and open the door to new, innovative, creative and visionary conceptions that contribute to sustainable development, and advance towards a learning community that includes all people who learn throughout life and develop a humanistic attitude and social responsibility of individuals and institutions.

Universities in the region and in Cuba are preparing the grounds for the higher education of the future, beyond 2030, so that the next generation of students, their profiles and needs together with the new skills of teachers and the preparation of better graduates with competencies to face the future, call for strategic policies to anticipate the university of tomorrow.

The development of the Cuban university, after its origins, its evolution and current development, supported by the educational work of more than sixty years, is in conditions to face the challenges imposed by the new normality, after the colossal deed developed during the COVID19 pandemic, and to adapt the strategies and prepare to assume the necessary transformations imposed by the new context.

Public policies on the production, dissemination and use of knowledge in universities in Cuba facilitate the network of actors involved in the formation, generation and application of new knowledge and its wider extension to regions and localities with conditions created for this purpose.

The Cuban university model implies a high level of integration with society, its productive sector, territories and communities; committed to the development of an advanced social project with harmonious integration of the economic, social, environmental and cultural vision of development, and the projection of an innovative university.

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