

“JLASC promotes the development of the scientific literacy, the popularization of science, the exchange of knowledge, the sharing of information that echoes on the construction of a community of shared future for mankind.”

Prof. Dr. Marco A. Cabero Z.
Editor-in-Chief
Journal of Latin American Sciences and Culture (JLASC)

“JLASC is open to the world, we are making science literacy available to everyone. Popularizing science can contribute to the development of culture, education, science, technology and economy, improving the well living of people.”

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Journal of Latin American Sciences and Culture (JLASC)

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Tiquipaya University Campus.
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P.O. Box 4742.
Cochabamba - Bolivia.

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**Journal of Latin American Sciences and Culture
(JLASC)**

Aims and scope

Introduction

The Journal of Latin American Sciences and Culture (JLASC) is an international journal seeking to promote the scientific landscape in Latin America by pushing conventional boundaries to include issues, perspectives, and methods relevant to education, science, technology, and culture. JLASC thus intends to truly internationalize these areas through the journal's attention globally.

JLASC seeks to explore not only the diversity and richness of Latin American scientific issues, but perspectives, research methods, and evidence of the many creative flows of influence that exist between Latin America, Sino-American cultures, and other peripheries, therefore, education, science, technology can be powered by wide-ranging ideas from many cultures and research areas.

JLASC welcomes submissions that focus on empirical research, theoretical analyses, or literature and book reviews. Proposals for special issues are actively encouraged and should be discussed with the Editor-in-Chief or a member of the Senior Editorial Team of the journal.

The JLASC promotes scientific literacy, the popularization of science, science popularization, media and information literacy (MIL) following the guidelines UNESCO. The JLASC also promotes the exchange of knowledge and the dissemination of information for the development of society in science, technology, innovation, education, culture. Special attention is given to the use promotion of Spanish for these purposes, as the Cervantes Institute is one of our collaborators. We also count on the support of Chaoxuan Intelligent Research Institute and Elektro High Tech Co. Ltd for the promotion of Science and Technology advances that can be beneficial for the world.

Editorial policies-part one

JLASC is a peer-reviewed journal published in English, Spanish, and Chinese by Universidad Privada del Valle (UNIVALLE), Bolivia. The journal only publishes manuscripts that meet the world class-standards of global academic publications. These

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must follow the guidelines provided on the website in the instructions for authors.

Those submissions deemed by the Editor-in-Chief and the Senior Editorial Team to be of the world-class will be published regardless of authors' ability to pay the Article Publication Charges (APCs), which are US\$600/£460/€530. Waivers for APCs can be requested by all authors regardless of background and will be appraised by the Publisher and the Editors based on individual circumstances and the ability to pay. Those who are truly unable to afford the APCs will receive full waivers. This includes many Latin Americans, as well as graduate students, independent researchers, and researchers from around the globe who do not have grants or other funds to cover publication costs.

Authors submit their manuscripts through the UNIVALLE website, Website Customization by: OpenJournalSystems.com (journal homepage: www.journalasc.org and submission site: www.revistas.univalle.edu) and receive an acknowledgment of submission. The Editorial Team assesses the manuscript, and the author is notified that the manuscript has either been rejected or that it is to be sent out for double blind external review.

Peer Review Policy

All submitted manuscripts are subject to initial appraisal by the Editors, and if found suitable for further consideration, to peer review by independent, anonymous expert referees. The Editors are supported by an active Editorial Board and an International Advisory Board. All refereeing is double blind. Submissions can be made online at: editorial@journalasc.org

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Read the Instructions for Authors for information on how to submit your article in <https://journalasc.org/author-instructions/>

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Editorial policies-part two

About this topic

The following policies apply to the *Journal of Latin American Sciences and Culture (JLASC)*. Where the journal is hosted at Universidad Privada del Valle (UNIVALLE) on behalf the Andean Road Countries for Sciences and Technology. Please read these policies in full before submitting your article, to ensure you've correctly followed all the requirements.

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You and your co-authors must list all relevant affiliations to attribute where the research or scholarly work was approved and/or supported and/or conducted. For non-research articles, you must list your current institutional affiliation. If you have moved to a different institution before the article has been published, you should list the affiliation where the work was conducted and include a note to state your current affiliation. If you do not have a current relevant institutional affiliation, you should state your independent status.

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The Journal of Latin American Sciences and Culture follows the Committee on Publication Ethics (COPE) guidelines on appeals to journal editor decisions and complaints about a journal's editorial management of the peer-review process. We welcome genuine appeals to editor decisions. However, you will need to provide strong evidence or new data/information in response to the editor's and reviewers' comments. Where you, as an author, wish to comment on aspects of the journal's editorial management please contact us at: editorial@journalasc.org

Authorship

Listing authors' names on an article is an important mechanism to give credit to those who have significantly contributed to the work. It also ensures transparency for those who are responsible for the integrity of the content. Authors listed on an article must meet all of the following criteria:

- Made a significant contribution to the work reported, whether that's in the conception, study design, execution, acquisition of data, analysis and interpretation, or in all these areas.

- Have drafted or written, or substantially revised or critically reviewed the article.
- Have agreed on the journal to which the article will be submitted.
- Reviewed and agreed on all versions of the article before submission, during revision, the final version accepted for publication, and any significant changes introduced at the proofing stage.
- Agree to take responsibility and be accountable for the contents of the article and to share responsibility to resolve any questions raised about the accuracy or integrity of the published work.

The journal editor will not decide on order of authorship and cannot arbitrate authorship disputes. Where unresolved disputes between the authors arise, the institution(s) where the work was performed will be asked to investigate. Consider details such as:

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- Assistance from scientific, medical, technical writers or translators
- Assistance with experiments and data analysis
- Acknowledgments
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Research and non-research articles must cite relevant, timely, and verified literature (peer-reviewed, where appropriate) to support any claims made in the article. You must avoid excessive and inappropriate self-citation or prearrangements among author groups to inappropriately cite each other's work, as this can be considered a form of misconduct called citation manipulation. If you're the author of a non-research article (e.g. a Review, Opinion, etc) you should ensure the references you cite are relevant and provide a fair and balanced overview of the current state of research or scholarly work on the topic. Your references should not be unfairly biased towards a particular research group, organization or journal. If you are unsure about whether to cite a source you should contact the journal editorial office for advice.

Competing interests

You and all your co-authors must declare any competing interests relevant to, or which can be perceived to be relevant to the article. A competing interest can occur where you (or your employer, sponsor or family/friends) have a financial,

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Corrections, expressions of concern, and retractions

Sometimes after an article has been published it may be necessary to make a change to the Version of Record (VoR). This will be done after careful consideration by the Editor who is also supported by Universidad Privada del Valle (UNIVALLE) and the Andean Road Countries for Science and Technology to ensure any necessary changes are done in accordance with guidance from the Committee on Publication Ethics (COPE). Any necessary changes will be accompanied with a post-publication notice which will be permanently linked to the original article. This can be in the form of a Correction notice, an Expression of Concern, a Retraction and in rare circumstances a Removal. The purpose of this mechanism of making changes which are permanent and transparent is to ensure the integrity of the scholarly record. Read our full policy on corrections, retractions, and updates to published articles.

Data availability and deposition

Universidad Privada del Valle (UNIVALLE) supports a number of open data initiatives and offers a suite of data-sharing policies. Contact us at: editorial@journalasc.org

Data repositories

A data repository is a storage space for researchers to deposit data sets associated with their research. And if you're an author seeking to comply with a journal data sharing policy, you'll need to identify a suitable repository for your data. Read our guide to choosing a data repository which includes some generalist repositories you may wish to consider.

Community-endorsed public repositories

Where community-endorsed mandates exist for submission of data to public repositories, authors should submit the datasets to the appropriate repositories and provide the accession numbers (where available) in the paper. Examples of

repositories community-endorsed public repositories include:

Data type Suggested repositories

DNA and RNA sequences Genbank
DNA and RNA sequences EMBL Nucleotide Sequence Database (ENA)
Gene expression Gene Expression Omnibus (GEO)
Gene expression ArrayExpress
Genetic polymorphisms dbSNP NCBI
Genetic polymorphisms dbVar NCBI
Genetic polymorphisms European Variation Archive (EVA)
Linked genotype and phenotype data dbGAP NCBI
Linked genotype and phenotype data European Genome-Phenome Archive (EGA)
Protein sequences Uniprot
Proteomics data PRIDE
Proteomics data PeptideAtlas
Metabolomics data Metabolomics Workbench
3-D printable models NIH 3D Print Exchange
Neuroimaging data OpenNeuro
Neuroimaging data NeuroVault
Macromolecular structures Biological Magnetic Resonance Data Bank (BMRB)
Macromolecular structures Electron Microscopy Data Resource (EMDB)
Macromolecular structures Worldwide Protein Data Bank (wwPDB)
Macromolecular structures RCSB Protein Data Bank (PDB)
Crystallographic data Cambridge Crystallographic Data Centre (CCDC)
Crystallographic data Crystallography Open Database (COD)
Earth and environmental science data PANGAEA
Earth and environmental science data NERC Data Centres
Earth and environmental science data World Data Center for Climate (WDCC)
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Humanities outputs CORE (Humanities Commons)

Custom computer codes, software tools, and mathematical algorithms

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- Maintaining and improving the quality of work the journal publishes and the integrity of its peer review process,
- Supporting the journal's authors and reviewers,
- Maintaining and improving the journal's reputation in collaboration with the journal's wider editorial team and Universidad Privada del Valle (UNIVALLE).

To support this role, our Editor Code of Conduct sets out the minimum standards for all editors who have responsibility for decisions on journal content to help ensure our journals publish quality, trustworthy content.

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Universidad Privada del Valle (UNIVALLE) will not tolerate any kind of harassment of our authors, editors, reviewers, staff, or vendors. We expect to work in an environment of mutual respect and will work with the Universidad Privada del Valle (UNIVALLE) ethics team and legal team to deal with any cases of harassment. Advice for researchers experiencing harassment: As a researcher, you should

expect your work to be scrutinized by the public, policy makers, and campaigners. However, some researchers working on high-profile subjects that attract controversy have also found themselves targeted with online harassment. To help researchers dealing with these issues, Universidad Privada del Valle (UNIVALLE) has supported the Science Media Centre in producing an updated guide, including tips on how to deal with social media harassment.

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Universidad Privada del Valle (UNIVALLE) takes all forms of misconduct seriously and will take all necessary action, in accordance with COPE guidelines, to protect the integrity of the scholarly record.

Examples of misconduct include (but are not limited to):

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- Duplicate submission/publication
- “Ethics dumping”
- Image or data manipulation/fabrication
- Peer review manipulation
- Plagiarism
- Text-recycling/self-plagiarism
- Undisclosed competing interests
- Unethical research

Peer review

Articles published in Universidad Privada del Valle (UNIVALLE) journals (including its imprints) undergo thorough peer review and the *Journal of Latin American Sciences and Culture* (JLASC) endorses COPE guidelines for reviewers.

Journals may operate different peer review processes. Our guide to understanding peer review outlines several different peer review models, including:

- Single-anonymous peer review (also called ‘single-blind peer review’)
- Double-anonymous peer review (also called ‘double-blind peer review’)
- Open peer review

Registered Reports

Every Universidad Privada del Valle (UNIVALLE) journal publishes a statement describing the model of peer review used by the journal within the journal homepage. Generally, comments from a minimum of two independent experts are required to ensure complete assessment of the article.

The details of the comments as well as the overall recommendations by peer reviewers will be considered by the Editor when deciding, but ultimate responsibility for acceptance or rejection lies with the Editor. In accordance with COPE recommendations on ethical editing for new Editors, Editors will assign any submissions they cannot handle (e.g., if they are

the author of an article submitted to their own journal) to a member of the Editorial Board or a guest editor. Most journals at Universidad Privada del Valle (UNIVALLE) do not permit you to recommend peer reviewers. If you wish to suggest potential reviewers this information can be included in the covering letter, but it is at the discretion of the Editors to consider these reviewers or not. Providing any false information about potential reviewers may lead to rejection of the article.

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It is a requirement to maintain confidentiality and integrity of the peer review and editorial decision-making process at all stages, complying with data protection regulations (including GDPR). The invited reviewer should declare any competing interest before submitting their report to the journal. If they wish to involve a colleague as a co-reviewer for an article, they should ask the journal editorial office before sharing the manuscript and include their names, affiliation, and any relevant competing interests in the comments for Editors when they return their report. In the process of investigating an ethical query, the submitted manuscript, author, reviewer, and any other person (including whistleblowers) involved will be treated in confidence. During an investigation it may be necessary for the Editor to share information with third parties, such as the ethics committee and/or the authors’ institution.

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We support the need for authors to share early versions of their work before peer-review publication. There are also several options for Universidad Privada del Valle (UNIVALLE) authors to share the final Version of Record of their published article.

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Sharing your published article

If you’ve published in Universidad Privada del Valle (UNIVALLE) journal, there are many ways you can share different versions of your article with colleagues and peers.

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Prior to starting the study, ethical approval must have been obtained for all protocols from the local institutional review board (IRB) or other appropriate ethics committee to confirm the study meets national and international guidelines for research on humans. A statement to confirm this must be included within the manuscript, which must provide details of the name of the ethics committee and reference/permit numbers where available.

This includes:

- Prospective studies on humans
- Clinical trials
- Clinical Case reports
- Organ or tissue transplants
- Human embryos and human stem cells
- Consent for research involving children, adolescents, and vulnerable or incapacitated study participants
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- Covert observational research
- Research on indigenous communities
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Studies involving vertebrates or regulated invertebrates (e.g. cephalopods), field studies and other non-experimental research on animals must

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Biosafety, biosecurity, and emerging biotechnology

Universidad Privada del Valle (UNIVALLE) journals will only consider research which has been carried out in compliance with institutional biosafety and biosecurity policies, which in turn should be informed by national or international recommendations.

Standards of reporting

Research should be communicated in a way that supports verification and reproducibility, and as such we encourage authors to provide comprehensive descriptions of their research rationale, protocol, methodology, and analysis. To aid authors in this, a number of study-design-specific consensus-based reporting guidelines have been developed, and we recommend you use these as guidance prior to submitting your manuscript. A comprehensive list of reporting guidelines for medicine and health research can be accessed via the EQUATOR network website, and for biosciences research via the MIBBI Foundry portal.

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1. Andean Road Countries for Science and Technology



Mission

ARCST is an international scientific organization founded in 2018 based on the general principles of "joint consultation, joint effort and joint sharing" and the promotion of shared development and achievement of the UN SDGs.

ARCST members include national academies of sciences, universities, research institutes, and international organizations. ARCST is committed to playing an effective role in catalyzing and implementing innovative international science initiatives to build a community of the whole humankind with a shared future. Science, Technology, Innovation, and Capacity building (STIC) is essential to the progress and welfare of human societies and ARCST is particularly keen to cooperate and partner with those who want to collaborate in these endeavors. Promoting the popularization of science, the exchange of knowledge, the diffusion of information, mutual learning, and collaboration.

Vision

To become an international science organization of global impact in catalyzing and implementing concrete innovative programs, initiatives and actions in Science, Technology, Innovation, and Capacity Building (STIC) for the promotion of shared development and the advancement of the UN Sustainable Development Goals (SDGs). We welcome you to join ARCST!

2. Elektro High Tech Co. Ltd.



Mission

To improve people's lives through meaningful innovation.

Vision

To inspire the world with innovative technologies, products, and design that enrich people's lives and contribute to social prosperity by creating a new future.

3. Universidad Privada del Valle



Founded on October 4, 1988, by Dr. Gonzalo Ruiz Martínez; Univalle has been projected as a synonym for academic excellence in Latin America with more than 32 undergraduate degree programs. Currently, about 14,000 national and foreign students carry out their higher studies in the university infrastructure with the greatest technological advance in Bolivia. In these 33 years of academic trajectory, Univalle has trained more than 16,000 professionals at the undergraduate and postgraduate levels in its four locations, which are in Cochabamba, La Paz, Sucre and Trinidad. And soon in the new headquarters located in

Santa Cruz. Our history reflects the fact that ... "We are the Scientific Answer to the Future".

Collaborators:

4. Cervantes Institute



The Cervantes Institute was founded in Spain in 1991. The largest organization of its kind, its mission is to promote the teaching and learning of Spanish and to make known the diverse cultures of Spanish speaking countries.

5. Chaoxuan Intelligent Research Institute



Chaoxuan is a group enterprise integrating research, operation and service, includes research institute, intelligent technology, vocational education, human resource service, industrial operation, financial capital and other business segments, and is committed to the top-level construction and systematic service of ecological scene. Focusing on the strategic deployment of the State, Chaoxuan adheres to the concept of selecting the better of the best and open interconnection, gathers expert resources and leading enterprises, takes research as the lead, takes Digital Twin and other IOT as the support, takes vocational education and human resources services as the core, collaborates with ecological platform, helps with capital and together with public welfare. Chaoxuan has taken the lead in the construction industry and rural revitalization and achieved remarkable results, promoting the transformation, and upgrading of traditional industries and promoting sound economic and social development. Chaoxuan has national high-tech, Zhongguancun High-tech, vocational education, labor dispatch, human resources service licensing, radio and TV program production and more than 200

intellectual property rights such as patents, Copyrights, trademarks and so on.

Chaoxuan Research Institute is a leading technology and mode research and development institution set up by Chaoxuan Group. The Institute brings together academicians and experts in various fields and has an academic committee and some expert committees. Focusing on the industry's pain points and social development needs, the Institute carries out theoretical research, industry research, model design, technology application, standard compilation, and international exchanges, providing strong support for economic and social development.

6. Media and Information Literacy (MIL) UNESCO



Our brains depend on information to work optimally. The quality of information we engage with largely determines our perceptions, beliefs and attitudes. It could be information from other persons, the media, libraries, archives, museums, publishers, or other information providers including those on the Internet. People across the world are witnessing a dramatic increase in access to information and communication. While some people are starved for information, others are flooded with print, broadcast and digital content. Media and Information Literacy (MIL) provides answers to the questions that we all ask ourselves at some point. How can we access, search, critically assess, use and contribute content wisely, both online and offline? What are our rights online and offline? What are the ethical issues surrounding the access and use of information? How can we engage with media and ICTs to promote equality, intercultural and interreligious dialogue, peace, freedom of expression and access to information? Through capacity-building resources, such as curricula development, policy guidelines and articulation, and assessment framework, UNESCO supports the development of MIL competencies among people. Free and open online courses are available for self-paced learning about MIL. Through media and information technologies, the Organization facilitates networking and research through the Global Alliance for Partnerships on MIL (GAPMIL) and MIL University Network. The recently launched

MIL CLICKS social media initiative is also part of UNESCO's strategy to enable media and information literate societies.

1. Mega Science



Science popularization means to bring science to the general public, to disseminate knowledge and to foster a scientific way of thinking among people. In particular, science popularization refers to the understanding of science and public engagement. In this way science popularization is a powerful tool and a strategic measure to build a modern society, not only disseminating useful knowledge and skills but spreading a general approach and a common culture.

In general, conflicts between science community and public opinion are connected to people's distrust but also to scientists' prejudice. In some cases, science is not correctly understood by non-scientist due to the use of technical jargon and wrong communication. We believe that every topic can be the object of science popularization; it only depends on the communication skills of who is in charge of the dissemination and the way to disseminate it. That is why we are glad to cooperate with Mega Science, the first platform of science popularization that creates and shares content in three languages and in diverse areas of science. Scan the following QR code to know more about it.



**The Journal of Latin American Sciences and Culture
promoting the**

“Green Science Project”.

**A practical approach emerged to foster MIL and
SCIENCE LITERACY**

The Journal of Latin American Sciences and Culture is promoting the “Green Science Project”. A practical approach emerged to foster MIL and SCIENCE LITERACY

We live in a technology-driven world, characterized by an overarching trend for digitalization that crosses all sectors of society and in the face of the growing impact of media. Knowledge, skills, and attitudes on media and information increasingly become an essential instrument for all citizens. The competencies for interaction and engagement of citizens with media and other information providers, including those on the Internet, are needed for all citizens and this is a lifelong learning process to which different stakeholders can contribute, in formal, informal, and non-formal initiatives.

Media and Information Literacy (MIL) has been growing steadily in all regions of the world, with many international and national organizations and initiatives being held. MIL is an antecedent of science literacy. When MIL is combined with science literacy, they can empower ordinary citizens to contribute to the fight against climate change.

The set of competencies to understand how climate change happens, its impacts, and relevant mitigation approaches are part of science literacy, often referred to as “climate literacy”. They are acquired and frequently applied by means of information, media, and digital technology, and are thus intertwined with MIL competencies. Citizens who lack MIL competencies are prone to climate-related disinformation and unverified claims disseminated through various forms of online and offline media. This leads to a low level of acceptance of climate change science, and ignorance of the actions that we can all take individually and collectively. The uninformed rejection of climate change science, nowadays quite common in public discourse, is a major obstacle and can be tackled with MIL.

Media and technology companies play a central role in educating and informing citizens on climate change. Media outlets and information flow on digital communications platforms amplify the urgency of the crisis, communicate key facts about climate, and debunk climate change denial and other conspiracy theories. It is hence crucial for citizens to know how this news and online content are produced, for what purposes, and based on what sources. MIL is also

vital for journalists to ensure factual and evidence-based reporting on climate.

The work from UNESCO in this regard is groundbreaking and there are countless efforts to promote and implement MIL internationally while accounting for its contribution to SDGs. Media and information literate citizens and decision-makers can access reliable information to make informed decisions as regards consumption and carbon footprint. They can adapt or change their attitudes and behaviors accordingly to avoid actions or policies that can exacerbate the crisis, based on accurate information and evidence. They are equipped to proactively counter climate change and contribute to strengthening the public trust in climate change science.

Our practical approach calls for:

- Raising awareness of the importance of checking facts related to environmental sustainability and paying attention to information sources.
- Providing people with the tools and resources needed to learn how to check sources of information, spot disinformation and spread information on the climate emergency in a responsible way.
- Encouraging people to get informed on the latest news, facts, and research about the climate emergency and what can be done at different levels.

We aim to bring together experts from different areas of expertise and knowledge about the different levels of MIL maturity or development that can be found around the globe to sharing of ideas and experiences. Additionally, it is expected to focus on challenges in each context with the objective of informing future policy recommendations on the best strategies to cope with the identified challenges.