

Relevant pedagogues



**Juan Alberto Mena Lorenzo (1962-2025).
Forger of the future, sower of knowledge**

**Juan Alberto Mena Lorenzo (1962-2025).
Forjador del porvenir, sembrador de saberes**

**Juan Alberto Mena Lorenzo (1962-2025).
Forjador do futuro, semeador do conhecimento**

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There are human beings who are beacons. Not because they seek to illuminate themselves, but because their essence is to guide others. Such was the life of PhD. Juan Alberto Mena Lorenzo, who lived to teach, and taught to transform. He was born on October 5, 1962, in Pinar del Río, his first vocation was honest and useful work, and education soon embraced him as its most faithful son. From his beginnings at the "Primero de Mayo" Institute to his consolidation as an academic pillar at the Hermanos Saíz Montes de Oca University of Pinar del Río, Professor Mena Lorenzo constantly dedicated himself to the education of generations of students, teachers, and researchers.

From his first steps in the academic world, Juan Alberto Mena Lorenzo embraced education as a life project. He began his higher education in a field that combined science, technology, and pedagogy: a Bachelor of Education with a focus on Machinery Construction, a degree he earned in 1984 from the then Héctor Alfredo Pineda Zaldívar University of Pedagogical Sciences for Technical and Professional Education.

A decade later, as a demonstration of his constant desire for improvement, he completed a degree in Mechanical Engineering at the University of Pinar del Río. The fusion of applied engineering and pedagogy began to take shape, forming a comprehensive perspective that would inform all his future work.

In 2003, he completed her Master's degree in Pedagogical Sciences, where he delved into the theoretical foundations of technical and vocational training, laying the groundwork for what would later become his particular methodological and didactic approach: a pedagogy focused on the productive context, school-business integration, and the professionalization of content.

The pinnacle of his academic training came in 2008, when he successfully defended his PhD in Pedagogical Sciences at the Central Institute of Pedagogical Sciences in Cuba. Finally, in 2016, he completed postdoctoral studies in Developmental Didactics and Competency Development at the Universidad Santander in Mexico, which reinforced his internationalist vision and updated his teaching and professional training methods.

His entire educational career reflects an unwavering desire to excel. His learning wasn't cumulative; it was transformative. Each qualification earned became a living tool for the training of others.

PhD. Mena Lorenzo's professional career is a symphony of perseverance, service, and impact. He began his teaching career in 1984 as a professor of technical subjects at the "Primero de Mayo" Polytechnic Institute, where he taught for over a decade. He was also the assistant director of technical and vocational training subjects.

Between 1997 and 2007, he served as Provincial Deputy Director of Technical Education and Vocational Training in Pinar del Río and participated in important international programs, with academic stays in Guatemala, Venezuela, and Spain. As director of the Robinsonian Technical Schools Reactivation Project in Venezuela, between 2004 and 2007, he demonstrated that cooperation can be an educational and human bridge.

Since 2007, he joined the Rafael María de Mendive University of Pedagogical Sciences as a professor and university researcher and, later, at the Center for Educational Sciences Studies at the University of Pinar del Río (CECEPRI). There, he taught highly complex subjects at both undergraduate and graduate levels: Educational Research Methodology, Vocational Training Didactics, Pedagogical Ethics, School Organization, Curriculum Design, Psychopedagogical Diagnosis, among many others.

He was head of R&D&I research projects, coordinator of master's and doctoral programs, national advisor to the Ministry of Education for Technical and Vocational Education, head of a scientific group, external evaluator of formative impact, and tutor of more than 60 master's and doctoral theses. Over more than four decades, Juan Alberto Mena Lorenzo was more than an educator: he was an architect of formative paths, builder of methodological alternatives and tireless defender of quality in Cuban technical education.

He was the author and co-author of more than a hundred scientific articles, books, chapters and essays published in high-impact national and international journals (Scopus, Web of Science, SciELO, Latindex). His signature is found in journals such as: *Spanish Journal of Comparative Education*, *REDIE*, *Roca*, *Conrado*, *Mendive*, *Professional Pedagogy*, *Portuguese Journal of Pedagogy*, among others.

Among his most studied topics are:

- University-business integration in technical training.
- The training method in productive professional activity.
- The development of scientific-research skills.
- The training in the workplace.
- Pedagogical impact assessment in Technical and Vocational Education (ETP) programs.

He participated in more than 50 national and international scientific events, where he served as a speaker, presenter, and workshop leader. His work transcended Cuba's borders, being recognized in Mexico, Sweden, Spain, the Dominican Republic, Chile, and other countries.

PhD. Mena Lorenzo has received numerous awards for his educational and scientific work. Among them are:

- Distinction "For Cuban Education"
- Medal "Rafael María de Mendive"
- "José Tey" Distinction
- "Ernesto Che Guevara" Distinction (ANIR)
- Annual Health Award (2023)
- Forgers of the Future Seal (special category)
- MES Scientific Merit Award (2021)
- Academic Book Award (Chile, 2021)

Each award he received was the result of a career guided by perseverance, integrity, and the social utility of education.

Beyond the researcher, professor, or manager, those who knew him remember him as a good man. With a calm speech, a kind demeanor, and an attentive listener, he knew how to exercise his authority wisely, without impositions. As a teacher, he was a model of humility and passion. He never denied time to anyone who needed guidance, a reading, or an opinion. He didn't teach from a pedestal, but from closeness, from pedagogical dialogue as an act of mutual trust. His students and colleagues remember him as a tireless educator, generous with knowledge, demanding yet humane. As one of his students famously said: " With PhD. Mena Lorenzo, one learned without fear, but with respect, because one knew one was in the presence of someone who was also learning from one of them."

Paulo Freire said that "education doesn't change the world: it changes the people who will change it." Juan Alberto Mena Lorenzo was one of those people. He educated to transform. He researched to build. He trained to serve.

And although he is no longer with us, his mark lives on: in every teacher who teaches with passion, in every student who excels, in every classroom where science and ethics walk hand in hand.

Thank you, teacher. Your work doesn't end here. It begins every day with those who continue to believe that teaching is also an act of love.

The complete lists of scientific events, publications and results of the academic production of PhD. Juan Alberto Mena Lorenzo are attached to this review, as documentary evidence of his vast and transcendent scientific work.

Participation in scientific events

- 5th International Scientific Workshop "Current Challenges and Perspectives in Educational Sciences." Ciego de Ávila, Cuba. April 2025. Presentation. Identification of Professional Problems Related to Auditing in the Initial Education Training of Bachelors in Economics. Irisdany Gómez Quintana, Juan Alberto Mena Lorenzo. Presentation.

- II National Workshop "Sergio Llinas "Quintans". For a Pedagogy of These Times, Pinar del Río, Cuba, February 2025. Presentation. The Professional Problems of Auditing. Its Gradual Derivation from Irisdany Gómez Quintana, Juan Alberto Mena Lorenzo.
- International Conference and Research Workshop "Interinstitutional Cooperation for Managing University Internationalization" IV Conference (2024). Presentation. Characterization of Scientific and Research Skills in Technical and Vocational Education. Pinar del Río, Cuba. Orama Sánchez, Y.; Mena Lorenzo; J. A.; and Aguilar Hernández, V.
- 14th International Congress on Higher Education (2024). Presentation. University-labor entity vocational training. Tasks during the evaluation process. Havana, Cuba. February 2024. Aguilar, V.; Aleida, Y.; Mena Lorenzo, J.A.; Gato Armas, C. A.; and Acosta Iglesias, A.
- 1st International Workshop on Quality and Sustainable Vocational Training "Train, Qualify, Employ." Havana, Cuba, November 25-29. Presentation. Didactics of the Workplace. Training Method in Productive Vocational Activity. Mena Lorenzo, J. A. (2024).
- 1st International Workshop on Quality and Sustainable Vocational Training "Train, Qualify, Employ." Havana, Cuba, November 25-29. Presentation. Scientific and Technological Development of Vocational Training Teachers. Methodology for Retraining in Organizations. Mena Lorenzo, J. A. (2024).
- International Conference & Cooperation Workshop "Challenges and Pathways in Educational Research". (March 20-24, 2023). Pinar del Río, Cuba. Presentation. University-business integration. Determining the engineering vocational training process. Juan Alberto Mena Lorenzo.
- International Conference & Cooperation Workshop "Challenges and Pathways in Educational Research". (March 20-24, 2023). Pinar del Río, Cuba. Presentation. Characterization of the professional development process in Contact Lens Therapy in the province of Pinar del Río. Anileidys Muñoz Lazo, Juan Alberto Mena Lorenzo.
- 14th International Meeting on Business and Tourism. University of Matanzas, Cuba, November 2023. Presentation. Methodology for determining professional problems related to auditing in Cuba. Irisdany Gómez Quintana and Juan Alberto Mena Lorenzo.
- International Congress on Pedagogy 2023. Presentation. The Institutional Educational Project. Need for its Contextualization in Technical and Vocational Education. Havana, Cuba, January-February 2023. Claribel Fragoso, Juan Alberto Mena Lorenzo, Vadim Aguilar Hernández.
- 13th International Congress on Higher Education. University 2022. Havana, Cuba, February 2022, Symposium 4. Training competent professionals from an inclusive and equitable

perspective, for sustainable development. Presentation. University-business integration, from its pedagogical foundations. Principles and functions. Juan Alberto Mena Lorenzo, Jorge Luis Mena Lorenzo.

- International Scientific Convention of the University of Cienfuegos. XI International Seminar on University Teaching, October 2022. Cienfuegos, Cuba. Presentation. Improvement in Contact Lenses. A Challenge for University Teaching in Pinar del Río. Anisleydis Muñoz Lazo and Juan Alberto Mena Lorenzo.
- VIII Stockholm International Conference & Research Workshop on VET, Stockholm, Sweden. May 11-13, 2022. Presentation. Integration and appropriation of professional content. Current challenges of Cuban Vocational Education & Training. Mena Lorenzo, J. A.; Mena Lorenzo, J. L.; Mena Lorenzo, J. L.; Pérez Viña, V. and Yturria Montenegro, P. L.
- 15th International Congress on Education and Innovation (CIEI). University of Florence (Italy). 2021: Book Chapter. Integrated Science Learning in Engineering. Dykinson Publishing. Jorge Luis Mena Lorenzo and Juan Alberto Mena Lorenzo.
- III Argentine Conference on Statistical Education and II Latin American Conference on Research in Statistical Education. National University of Litoral (FHUC-UNL) and the Latin American Network for Research in Statistical Education (RELIEE (2021)). Presentation. Cross-sectional study of attitudes towards statistics in Computer Engineering. Susana Roig Armas, Jorge Luis Mena Lorenzo and Juan Alberto Mena Lorenzo.
- VI Symposium on the Teaching of Basic Sciences, Engineering, and Architecture. University of Pinar del Río, Cuba. 2021. Presentation. Attitudes toward statistics among Computer Science students. Susana Roig Armas, Jorge Luis Mena Lorenzo, and Juan Alberto Mena Lorenzo.
- International Congress on Pedagogy 2021. Havana, Cuba. Presentation. Learning through connection with the environment. Methods and procedures. Yudiel E. Aguilar Blanco and Juan Alberto Mena Lorenzo.
- III International Seminar on Scientific Research and Dissemination of Results of Projects Financed by FNI Mozambique, 2021. Presentation. The role of the company formação de engenheiros mechanics na Pinar del Rio University "Hermanos Saiz Montes de Oca". Characteristics. José Antonio Ferreira; Juan Alberto Mena Lorenzo; Armando Acosta Iglesias.
- 2nd Caribbean Congress on Educational Research. Santo Domingo, Dominican Republic (2021). Presentation. Determining the professional problems to be addressed in the training

of the Bachelor of Education. Irisdany Gómez Quintana, Juan Alberto Mena Lorenzo, Vadim Aguilar Hernández.

- 3rd International Scientific Conference of the University of Cienfuegos. Cienfuegos, Cuba (2021). Presentation. The development of scientific and research skills in the field of social work. Yaima Oramas Sánchez, Juan Alberto Mena Lorenzo.
- International Conference on the Dissemination of Research in Educational Technologies. University of Seville, Faculty of Educational Sciences, Spain. Date: 2021. Presentation. Teaching and Learning in Workplaces: A Path to Vocational Training. Authors: Juan Alberto Mena Lorenzo.
- International Conference on the Dissemination of Research in Educational Technologies. University of Seville, Faculty of Education Sciences, Spain. Date: 2021. Presentation. Teacher Training from the Company in Professional Development. Authors: Juan Alberto Mena Lorenzo.
- 12th International Congress on Higher Education. University 2020, Havana, Cuba. Course. University-Productive Institution: Theory and Practical Experiences in Higher Education. Authors: Juan Alberto Mena Lorenzo and Jorge Luis Mena Lorenzo.
- VII Latin American Educator Exchange, 2019, APC. Pinar del Río, Cuba. Presentation. Technical and Vocational Education: A New Learning Method in the Company. Juan Alberto Mena Lorenzo, Jorge Luis Mena Lorenzo, Armando Acosta Iglesias.
- VII National Workshop on Pedagogical Technological Integration. University of Granma, Granma. 2019. Inaugural Conference: Current Challenges in the Integration and Appropriation of Professional Content. Juan Alberto Mena Lorenzo, Jorge Luis Mena Lorenzo.
- 5th International Conference on Professional Pedagogy. Havana, Cuba. (2018). April 24-28. Juan Alberto Mena Lorenzo.
- 1st International Symposium of the Network of Researchers in Science and Technology: Science and Technological Innovation. Havana, Cuba (2019). Presentation. University-labor integration in the continuing education of education professionals for technical careers. Juan Alberto Mena Lorenzo.
- 2nd International Workshop on Educational Management. UCP "Enrique J. Varona". Havana, Cuba (2019). Presentation. The development of managers and the reserves for leading educational institutions. Juan Alberto Mena Lorenzo.
- Conference international Skill up "Extending the scope Authentic Learning and career counseling and guidance in Higher education", Stockholm, Sweden (2018). Presentation. The

didactic of the Vocational Education Training (VET). New demands- New approaches. Authors: Juan Alberto Mena Lorenzo; Jorge Luis Mena Lorenzo.

- International Congress on Pedagogy 2017, Havana, Cuba. Conference "Professional Skills and Competencies. Strategic Pillars of Vocational Training". Author: Juan Alberto Mena Lorenzo.
- 2nd International Scientific Symposium 45th Anniversary of the University of Pinar del Río "Hermanos Saíz Montes de Oca". Publication. Publication: Proceedings. University of Pinar del Río, Cuba (2017). Presentation. Professional Pedagogy. Method for Training in Productive Professional Action. Author: Juan Alberto Mena Lorenzo.
- 1st International Symposium of the Network of Researchers in Science and Technology: Science and Technological Innovation. Havana, Cuba. (2017). Presentation. University-Environment Integration in the Continuing Education of Education Professionals. Juan Alberto Mena Lorenzo.
- 1st International Workshop on Educational Management. UCP "Enrique J. Varona". Havana, Cuba (2017). Presentation. The development of managers and the reserves for leading educational institutions. Presentation. Diploma. Management of ETP institutions. Experiences. Author: Juan Alberto Mena Lorenzo.
- II International Forum "Integration of Technical Sciences." Havana, Cuba (2017). Presentation. Model of university integration with the productive and service environment in teacher training. Author: Juan Alberto Mena Lorenzo.
- 1st International Conference on Educational Research for Master's and Doctoral Students. Cancún, Mexico (2016). Presentation. The Training of Competent Professionals. Needs of Higher Education Institutions (HEIs). Juan Alberto Mena Lorenzo.
- V Conferences on investigative results of the VET. Stockholm University, Sweden (2016). Presentation. An approach to the research nature of the current technical and vocational Cuban education. Authors. Juan Alberto Mena Lorenzo, Pedro L. Yturria.
- IX Symposium "Improving Teacher Professional Development." Enrique J. Varona University, Havana, Cuba (2015). Keynote Conference: "Professional Pedagogy: A Science Under Construction." Speaker: Juan Alberto Mena Lorenzo.
- II International Workshop "Professional Pedagogy and its Influence on Cuban Socioeconomic Development. Pinar del Río, Cuba. (2015). Presentation. Seven conditions for an efficient ETP process. Author: Juan Alberto Mena Lorenzo.
- 10th Congress on Science Teaching. Convention Center. Havana, Cuba. (2015). The Method of Training in Productive Professional Action. Author: Juan Alberto Mena Lorenzo.

- Pedagogy Congress 2015. Convention Center. Havana, Cuba. (2015). Presentation. Title: Polytechnic Institute-Community Integration: An Imperative for Current Vocational Training. Author: Juan Alberto Mena Lorenzo.
- Tecnicencias 2014, Pinar del Río, Cuba. (2014). Presentation. ETP Didactics. Author: Juan Alberto Mena Lorenzo.
- 3rd International Workshop on Professional Pedagogy, Havana, Cuba, UCPETP (2014). Presentation. New training models for ETP. New scenarios. Author: Juan Alberto Mena Lorenzo.
- Pedagogy Congress 2013. Havana, Cuba (2013). Presentation. Vocational training in integration. Author: Juan Alberto Mena Lorenzo.
- Pedagogy Congress 2013. Havana, Cuba (2013). International Course. ETP-Company Integration. Shared Vocational Training Model. Trainee: Juan Alberto Mena Lorenzo.
- 1st International Workshop "Professional Pedagogy. Challenges and Perspectives." Pinar del Río, Cuba. (2013) Inaugural Lecture. "Professional Pedagogy, a Science under Construction." Speaker: Juan Alberto Mena Lorenzo.
- Tecnicencias 2012, Pinar del Río, Cuba. (2012). Presentation. Indicators for the evaluation of the ETP process. Author: Juan Alberto Mena Lorenzo.
- Pedagogy Congress 2011. Havana, Cuba (2011). International course. The company as a training context. Experiences. Trainee. Juan Alberto Mena Lorenzo.

Publications

- Acosta, A., Mena, J. A. and Martínez, D. (2012). Human and cultural components involved in the practical teaching process of welding in the productive entity. Their interactions. *Digital Journal of Professional Pedagogy*, 10(1).
- Aguilar Blando, Y. E., and Mena Lorenzo, J. A. (2022). The practical teaching class in the workplace. *Roca: Scientific-educational journal*, 18(2). https://redib.org/Record/oai_revista3608-roca-revista-cient%C3%ADfico-educacional-de-la-provincia-
- Aguilar, Y. E., Mena, J.A., & Mena, J. L. (2021). Technical and Vocational Education student learning in the workplace. Methods and procedures. *Mendive Journal*, 19 (3), 794-808.
- Armas, L., Fernández, M. and Mena, J.A. (2016). Managing the teaching-learning process of automotive mechanics in annex classrooms: some considerations for its development. *Mendive Journal*, 14 (1).

- Benítez, S. and Mena, J.A. (2016). Historical evolution of the training and development of professional skills in the Industrial Mechanics specialty, in Pinar del Río. *Mendive Journal*, 14 (4).
- Carreño, Y. and Mena, J.A. (2017). Vocational training for 5th grade primary school students. *IPLAC Digital Journal*, 2017 (2).
- Coste, F. and Mena, J.A. (2017). Professional development in the development of teachers' environmental culture. *IPLAC Digital Journal*, 2017 (2).
- Del Llano Hernández, R. and Mena Lorenzo, J.A. (2023). Professional skills of internal medicine specialists in caring for pregnant women with associated pathologies. *Mendive Journal*, 21 (4).
- Díaz Y. and Mena, JA (2015). The scientific and technological development of agricultural teachers: a guarantee of effective performance. *Mendive Journal*, 13 (53).
- Díaz, Y., Mena, J.A. and Breijo, T. (2016). The scientific and technological updating of agricultural teachers: a form of knowledge management. *IPLAC Digital Journal*, 2016 (2).
- Dueñas, N., Mainegra, D., & Mena, J.A. (2016). A pedagogical conception for agricultural vocational training based on community social communication. *Orbita Científica Digital Journal*, 22 (92).
- Dueñas, N., Mainegra, D., & Mena, J.A. (2017). Communication as a way of helping ensure the future agronomists the community needs. *Avances Journal*, 19 (4).
- Ferreira, J.A., Mena, J.A., Acosta Iglesias, A., & Mena, J. L. (2019). The company, an essential context for the professional training process of engineers. Its educational potential. *Mendive Journal*, 17 (4), 604-618.
- Ferreira, J., Mena Lorenzo, J.A., and Acosta, A. (2022). Functions of the integration process of the Mechanical Engineering program with local companies. *Roca: Scientific-Educational Journal*, 18(3). <https://roca.udg.co.cu>
- García, P. A., Mena, J. A., and Mena, J. L. (2019). The Camilo Cienfuegos Military School, the center of the training process of the essential qualities of Camilito as a future military professional. In *Science and Technological Innovation* (Vol. III, pp. 449-457). Academic University Press.
- García, J. R. and Mena, J. A. (2018). The improvement of the tutor teacher of pedagogical training students during work placements. *Mendive Journal*, 16 (1).

- Gómez, I., Mena, J. A. and Gamez, A. (2023). The teaching-learning process of the Audit subject from the gradual derivation of professional problems. *Conrado Journal*, 19 (91). <https://conrado.ucf.edu.cu/index.php/conrado/article/view/2958>
- Gómez, I. and Mena, J. A. (2025). The teaching-learning process of the Audit subject from the gradual derivation of professional problems. *Mendive Journal*, 23 (1).
- Gómez, I., Mena, J. A., & Aguilar, V. (2021). The teaching-learning process of the Audit subject and its professional problems. *Mendive Journal*, 19 (2).
- León, Y. and Mena, J. A. (2018). Áker Aragón Castro: Father of Cuban Technical and Vocational Education. *Mendive Journal*, 16 (4).
- Linares, M., Alea, M. P., and Mena, J.A. (2024). Didactic categories of the teaching-learning process of software design, related to Databases. *Cuban Journal of Medical Informatics*, 16 (1).
- Linares, M., González, L. A., Aleas, M., Mena, J. A., & Cruz, D. (2016). Software design in the training of health information systems professionals. *Pinar del Río Journal of Medical Sciences*, 20 (2), 233-240.
- Linares, M., Alea, M., and Mena, J. A. (2018). Didactic model for software design in the Health Information Systems program. *Pinar del Río Journal of Medical Sciences*, 22 (1).
- López, A. M. and Mena, J. A. (2016). The professional orientation in the specialty Administration of the Human Capital. *Mendive Journal*, 14(4), 56-64.
- Malloch, M., Mena, JA, Mena, J. L., Moreno, L. and Yturria, P. L. (2021). Vocational Education and Training in Cuba: A Process of Changes Towards Learning in the Workplace. In M. Malloch, L. Cairns, K. Evans, and B. N. O'Connor (Eds.), *The SAGE Handbook of Learning and Work* (Chap. 36). SAGEReference.
- Medina, MC, Fabe, I., & Mena, JA (2021). Professional pedagogical competencies of the Bachelor of Education. *Mendive Journal*, 19(3). <https://mendive.upr.edu.cu/index.php/MendiveUPR/article/view/2338>
- Mena, JA (2011). Where was science really born? IPLAC Digital Journal, 2011(2).
- Mena, J.A. and Mena, J. L. (2011). A didactic approach to teaching and learning basic sciences focused on content integration in the agronomy degree program. *Journal of University Pedagogy*, 16(4).
- Mena, J. A. & Mena, J. L. (2020). The training method in productive professional activity. *Portuguese Journal of Pedagogy*, 53(1), 81-96. https://doi.org/10.14195/1647-8614_53-1_5

- Mena, J. A. and Mena, J. L. (2022). The training of Cuban professionals in the business context. *Spanish Journal of Comparative Education*, 41, 230-249. <https://revistas.uned.es/index.php/REEC/article/view/34891>
- Mena, J. A., Mena, J. L., Pérez, V. M. and Yturria, P. L. (2020). Integration and appropriation of professional content. Current challenges of Cuban vocational technical education. In L. Moreno, M. Teräs and P. Gougoulakis (eds.), *Emerging Issues In Research On Vocational Education & Training* (Vol. 6, pp. 280-309). Premiss.
- Mena, J. L., Roig, S., Mena, J. A., & Fernández, C. L. (2024). Attitudes toward statistics among computer science students. *Mendive Journal*, 22(4). <https://mendive.upr.edu.cu/index.php/MendiveUPR/article/view/4099>
- Méndez, R.; Mena, J. A., & Pulido, A. (2017). Characterization of the development of basic professional skill measurement in students of the Hydraulics specialty. *Mendive*, 15.
- Muñoz Lazo, A., Mena Lorenzo, J. A., and Rodríguez López, M. (2023). Strengths and weaknesses of professional development in contact lenses for the graduate in Optometry and Optics of Pinar del Río. *Journal of Health, Science and Technology - Conference Series*, 2, 505. <https://doi.org/10.56294/saludcyt2023505>
- Orama, Y., and Mena, J. A. (2024). Methodology for the development of scientific and research skills using information and communication technologies. *Mendive Journal*, 22(4). <https://mendive.upr.edu.cu/index.php/MendiveUPR/article/view/4100>
- Oramas Sánchez, Y. and Mena Lorenzo, J.A. (2022). The development of scientific and research skills in pedagogical schools. *Conrado Journal*, 18(86), 56-65. <https://conrado.ucf.edu.cu/index.php/conrado/article/view/2459>
- Paz, N. E., Mena, J. A., and Téllez, L. (2025). Background to the training of the Higher Technician in Water and Sanitation. *Didactics and Education*, 16(2). (In press)
- Perdomo Valido, A., Mena Lorenzo, J. A., & Ferrer Cosme, J. L. (2023). The formation and development of basic professional skills. In *Pedagogy and Professional Development* (Ch. 22). Social Sciences. ISBN 978-0-3110-0049-4.
- Rodríguez, M.; Mena, J. A. & Morera, M. (2012). The training process of the tutor professor in the nursing degree program. *Digital Journal of Professional Pedagogy*, 11(1).

Participation in research projects

Project title: Sustainable Intermediate Vocational Training. Contribution to its Improvement. Institutional. UPR. Project Manager

Participating entities: University of Pinar del Río, Ministry of Education.

Duration: 2021-2026

Project manager

Project title: Management of the training process of competent professionals for sustainable development.

Sectorial. Main entity UPR

Participating entities: University of Matanzas and University of Havana.

Duration: 2022-2025

Task Manager: University-Employment Liaison

Project title: Middle-level vocational training in the conditions of Pinar del Río

Associated with the National Program. Main entity of the UPR

Duration: 2016-2020

Project manager

Project title: Training a Skilled Workforce: Pathways to its Development

Associated with the National Program. Main entity of the UPR

Duration: 2012-2015

Head of the Pinar del Río Research Group

Project title: Shared vocational training between universities and production and service entities

Institutional. Rafael María de Mendive University of Pedagogical Sciences.

Duration: 2012-2015

Project manager

Project title: Diagnostic study of the curriculum in vocational training

Associated with the National Program. Principal Entity. Central Institute of Pedagogical Sciences (National Project)

Duration: 2012-2013

Head of the Pinar del Río Research Group

Project title: History of pedagogical vocational training in Pinar del Río

Rafael María de Mendive University of Pedagogical Sciences

Duration: 2007-2012

Project Manager

Project title: Reactivation of the Robinsonian Technical Schools.

Ministry of Education of Venezuela

Duration: 2003-2007

Project manager

Directed theses

Doctorate

- Armando Acosta Iglesias (2012) Methodological didactic conception for the practical teaching of welding in the productive entity
- Jorge Candelario Milian (2012). Didactic conception for the professionalization of the contents of the Chemistry subject
- Vadim Aguilar Hernández (2015) Didactic conception for the evaluation process of learning professional content in job insertion
- Armando Rodríguez Villalobos (2017). Model for training agricultural producers for food sustainability
- Jesús Jorge Pérez (2016) Strategy for training in environmental education for managers.
- Jorge Luis Ferrer Cosme (2017). Methodology for evaluating the quality of the vocational technical education process in the Industrial Mechanics specialty.
- Jesús Pérez López (2017). Strategy for environmental education in teacher training. (Consultant)
- Xiomara Valderrama Fernández (2018). Linking technical schools with socio-productive organizations in the field of Administrative Services. A strategy for implementation in Venezuela.
- Jacquelin C Ramos Castillo (2018). Continuing education for secondary school teachers to coordinate socio-productive projects. A strategy for implementation in Venezuela.
- Domitila Valle Sucre (2018). Managing the Physics Teaching-Learning Process in Secondary Education with a Creative Approach. A Strategy for Implementation in Venezuela
- Robert Saul Nieves (2018). The integration of information and communication technologies in the pedagogical process. A strategy for its implementation in Venezuela.
- Noemí Dueñas Bravo (2018). Pedagogical conception of the improvement of the agricultural vocational training process based on community social communication.
- Rolando Pacheco Rodríguez (2019). Theoretical and methodological conception on the improvement of the methodological work system of the Provincial Directorate of Education.
- Mayennys Linares Ríos (2019). Didactic model on the design of database software in the Health Technology program.
- Yudiél Eduardo Aguilar Blanco (2019). Dynamics of the teaching-learning process of work practice in the Civil Construction specialty.

- Madelaime Ramos Vives (2022). Theoretical and methodological conception of the pedagogical training of nursing graduates.
- José Antonio Ferreira (2022). The vocational training process for mechanical engineering. The role of companies.
- Anileidys Muñoz Lazo. (2024) The Improvement in Contact Lenses of the Bachelor of Optometry and Optics of Pinar del Río.

Master degrees

- Lázaro García (2007). A methodology for the development of specialization in mountain agronomy.
- Bernardo Ordaz (2008). Strategy for the preparation of the tutor in pedagogical micro-universities.
- Atilano Redonet. (2009). Career guidance toward transportation specialties. An alternative for its implementation.
- Juan Pablo Morejón. System of activities for the development of professional guidance in construction specialties. (2009).
- Silvia Eichel Ramírez. System of activities to enhance professional motivation. (2009).
- Ramón Páez Miranda. A methodological alternative for improving the direction of students' pre-professional practice (2009).
- Yolanda García Pedroso. A methodological alternative for improving the skills of comprehensive teachers in coordinating chemistry online classes (2009).
- Carlos Alberto Gonzáles. The Development of Interdisciplinary Relationships among the Technical Subjects of the Accounting Specialty. (2010)
- Ida López Pérez. Methodological alternative for developing the ability to calculate in Annex 57-A of trade schools. (2010)
- Hilario Peña. System of activities for the development of economic literacy in vocational school students. (2010)
- Dorna Martínez. System of activities for developing the interdisciplinary nature of mathematics in pedagogical professional training. (2010)
- Sixto Cuadras. Curriculum design for the Rabbit Breeding Specialization for the Veterinary Animal Husbandry Internship. (2010)
- Yuset Díaz Placencia. Methodology for the scientific and technical development of agricultural teachers. (2010)

- Beri Albert Díaz. Strategy for the development of tutors in the Library Science specialty. (2010)
- Roberto Miranda García. Strategy for the development of vocational training in the IPVCE (Institutional Training Institutes). (2010)
- Felix Forteza Ledesma. Pedagogical strategy for retraining electrical teachers in employers' organizations. (2010).
- Alicia María Gilimas: A system of teacher preparation workshops for developing interdisciplinary relationships in sports schools. (2010)
- Leon Nogueira. Polytechnic School-Company Integration: A Methodological Alternative for Systematizing the Experience at the "Tranquilino Sandalio de Noda" IPA in Pinar del Río. (2012)
- Guido González Díaz. Therapeutic exercises for students with disabilities in physical education, at CP 1ro de mayo
- Alexander Sierra Barrios. Methodology for managing the vocational guidance process, based on the training demand for the transport operation specialty. (2013)
- Alain Díaz Requeira. Bibliographic brochure on the Conformation of Bodywork Elements, in the subject of Technology and Practice of the Bodywork Specialty. (2013)
- Amelia Milagro López Martínez. Career guidance toward the Human Capital Management specialty: a system of activities for its strengthening. (2016)
- Maximiliano Lugo. Content potential for ideopolitical work: developing skills for use in the subject of Defense Preparation in the medical program. (2016)
- Yuleisy Azcuy González. Teaching strategy for developing English writing skills for first-year medical students. (2016)
- Osniel Rodríguez Gato. Strategy for the development of ETP teacher guides for the effective management of educational work. (2017)
- Yamilé Ramos Cordero. A strategy for vocational guidance toward technical specialties for secondary school students. (2017)
- Alexander Rodríguez. Methodology for measuring the impact of methodological work in ETP. (2017)
- Yosleydis Carreño Herrera: A system of activities for vocational training for fifth-grade students at the "José Antonio Echeverría Bianchi" semi-boardings school. (2018)
- Rafael Antonio Méndez Carmona. System of activities for developing measurement skills in Construction Execution I, Hydraulics specialty. (2018)

- Yamila Ramírez Guerra: Developing the ability to propagate fruit trees as plants of agricultural interest among students of the Agronomy Specialty. (2018)
- Kenia Baro. System of activities for environmental education for motor vehicle mechanics students. (2018)
- José Reinaldo García: The development of tutor teachers during pedagogical professional training in work practice. (2018)
- Amaelys Acosta. Developing staff at the Pinar del Río construction and assembly company. A strategy for its development. (2018)
- Anisleydis Muñoz Lazo. The ethical training of the graduate of Optometry and Optics, based on his or her experience working with Contact Lenses. (2021)
- Yayma Oramas Sánchez. The development of scientific and research skills in students of the Social Work specialty. (2021)
- Marionel Acosta Rodríguez. Basic bibliography for the learning process of the subject Elements of Economics and Labor Legislation. (2021)
- Irisdany Gómez Quintana. Methodology for determining professional problems in the subject of Auditing. (2021)
- Rolando del Llano Hernández. Training program for developing professional skills for internal medicine residents in the care of pregnant women with associated conditions. (2023)
- Yoal Aguiar Ferro. Pedagogical Strategy for Professional Development in Clinical Dosimetry for Medical Imaging and Radiophysics Technologists in the Province of Pinar del Río. (2023)
- Alberto Yandi Perdomo valid. Professional skills development in the specialty of Turning. (2023)

Postgraduate specialty

- Yurelys González Días. Psychopedagogical guidelines for the construction and use of teaching aids in the 1st cycle of Primary Education (2023).
- Madelaine Acanda. Psychopedagogical counseling for 10th-grade teachers on students' sexual orientation.

Awards and recognitions (last five years)

Cuban Academy of Sciences (ACC) Award

- Pedagogical Strategy for professional development in clinical dosimetry content for Medical Imaging and Radiophysics Technologists in the province of Pinar del Río.
- The training process in Health and Safety Management for inspectors from the National Labor Inspection Office.
- Training program for developing professional skills for internal medicine residents in the care of pregnant women with associated conditions.
- The training process for the professional pedagogical performance of labor and social security specialists in labor departments.
- Group Educational Project for professional reaffirmation in the Computer Science specialty at the First of May Polytechnic Center
- Model to enhance company participation in the professional training process of the Mechanical Engineer
- The didactic and methodological training of teachers of the Optometry and Optics Program of Pinar del Río
- Pedagogical strategy for contact lens training for the Bachelor of Optometry and Optics of Pinar del Río.
- The development of the physical abilities of the Mechanics student through Physical Education.
- Methodology for determining professional problems as components in the training process of the Bachelor of Education. Economics
- Methodology to improve the development of scientific and research skills in students of the Social Work specialty
- Theoretical and methodological conception of the pedagogical training process of Nursing degree students
- System of activities to strengthen professional guidance for students of the Welding specialty at the First of May Polytechnic Center
- Didactic strategy of the teaching-learning process of software design related to databases using the project method
- Diploma: Management of ETP Institutions
- Extension pedagogical model for training agricultural producers based on food sustainability

- Strategy for the direction of educational work by the tutor teachers at the "Primero de Mayo" Polytechnic Center
- Cuban higher education from a shared university-productive institution vocational training approach (Published Book)
- Methodology for evaluating the impact of the Master's degree in Professional Pedagogy
- The integration process of polytechnic schools and companies: methodology for its development in technical and vocational education.
- Strategy for the development of staff development at the Pinar del Río Construction and Assembly Company
- System of teaching tasks for developing the ability to syntactically analyze simple sentences in students of the Agronomy specialty.
- System of activities for environmental education for Motor Vehicle Mechanics students.
- Methodological alternative for the professional development of teachers in document management at the Teaching Secretariat of the Faculty of Early Childhood Education at the UPR.
- Strategy for the direction of educational work by the tutor teachers at the "Primero de Mayo" Polytechnic Center.
- Methodological Strategy for the development of technical professional skills in qualified agricultural teachers at the "Tranquilino Sandalio de Noda" Polytechnic Center.
- The professionalization of content on chemical substances and reactions in the training of mid-level agricultural technicians.
- Bibliographic brochure on Food Preservation contents.
- Cuban higher education from a shared university-productive institution vocational training approach (Published Book)
- Methodology for evaluating the impact of the Master's degree in Professional Pedagogy
- System of activities for the vocational training of fifth-grade students
- System of activities for developing measurement skills in the Hydraulic Installations specialty.
- System of exercises to strengthen the professionalization of the treatment of mathematical contents in the initial training of the Intermediate Technician in the Specialty of Civil Construction of the Polytechnic Center "Pedro Téllez Valdés"
- Strategy for the development of competent professional performance modes in qualified teachers
- Strategy to improve the teaching-learning process of Statistics in Computer Engineering.

- The development of the professional skill of designing strategies with scientific rigor in Industrial Engineering students.
- Didactic conception for the development of experimental physics skills in Agronomy students
- The integration process of polytechnic schools and companies: methodology for its development in technical and vocational education.

Technological Innovation Awards (IT)

- Model to enhance company participation in the professional training process of the Mechanical Engineer
- Implementation of a methodology for identifying professional problems in the training of graduates in education. Economics.
- Training Software for the study of Political Economy "The Capitalist Mode of Production".
- Methodology for managing the school-business integration process
- Extension pedagogical model for training agricultural producers based on food sustainability.
- Conception of vocational training as a contribution to ensuring the professionals needed by the agricultural sector in the municipality of La Palma
- Integrative assessment: its contribution to professional development in the Bachelor's degree in Agricultural Education.
- Methodology for the integration of scientific content in the Agricultural Engineering degree
- Methodology of the process of training experimental skills in Physics with a professional research approach

Others

- 2023 Annual Health Award (national)
- José Tey Distinction
- Rafael María Mendive Medal
- Distinction for Cuban Education
- UdeC Academic Book Competition for the book "Initial Teacher Training from an Interdisciplinary Perspective in Chile." University of Concepción. School of Education. Interdisciplinary Research Group in Education (GIIE). (Chapter titled: Current Challenges of Content Integration and Appropriation in Initial Teacher Training)

- Special Distinction from the Minister of Higher Education for Merit in Scientific and Technological Research and Innovation (2021)
- Special Distinction from the Minister of Higher Education for Merit in Postgraduate Studies (2020)
- Ernesto Che Guevara Distinction (Anir)
- Recognition of Academic Excellence. Santander University, United Mexican States

Conflict of interest

The author declares that she has no conflicts of interest.

Authors' contribution

The author designed and wrote the section.



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