

Research Themes of the IALU Research Agenda

The IALU shall promote and foster research collaboration among Lasallian researchers in a few, focused research themes. These strategic research themes certainly must not preclude the pursuit of other lines of research according to the individual missions and visions of the IALU member institutions. For the period 2013 to 2018, these are the following:

1. **Food, Nutrition and Health** (e.g. *biochemistry of food products, science and engineering of potable water, cancer risks and cure from food, economic impact studies of nutrition programs in schools*)
2. **Sustainability and the Environment** (e.g. *dealing with climate change, eco-design of houses and urban centers, industrial ecology, air and water quality monitoring in mega-cities*)
3. **Education and Learning Innovations** (e.g. *access to education among the poor, impact of use of tablets for learning math and science, coping mechanisms among children with learning disabilities, predicting the academic emotions of young learners based on physiological signals*)

Of course, the IALU always values and supports research on the life and heritage of John Baptist de La Salle and on modern educational practices and the evangelization of the young.

Towards positive, meaningful, lasting and inclusive growth in society, strategic research of the IALU can take various forms, including:

1. studies that are meant to gather data and information in order to understand and characterize a phenomenon (e.g. a food substance, an attitude, a social occurrence, current or past event);
2. studies and experiments designed to explore, analyze, and elucidate the dynamics and particularities of some system (e.g. groups of persons, ecosystems, organizations, entire nation) using some framework, method, or scientific approach;
3. impact studies that evaluate and assess the effect of any kind of measure, policy, or intervention, as they apply, for example, to schools, communities, business organizations, and even society at large;
4. research and development projects that build procedures, processes, and systems as well as physical contraptions, gadgets, apparatus, and even infrastructural elements;
5. creative work in various forms, such as film and documentaries, literary work, and visual art, that celebrate humanity, reflect society, or ponder into what is left unsaid, unstudied, and unattended; and

6. policy recommendations that may improve governance in government and non-government institutions.

Call for Collaborative Research projects

The IALU seeks to jumpstart research collaboration among IALU member schools by encouraging proposals for large external grants from funding institutions such as the USAID, IDRC, GTZ, FAO, and JICA. As a first step, there will be a Call for Collaborative Research Projects along one *focus area* for each of the three research themes of the IALU Research Agenda.

1 IALU Research Theme: *Food, Nutrition and Health*

Focus Area: *Food Safety and Security*

According to FAO, 842 million people are affected by undernourishment in 2013 (or 1 in 8 people in the world). Although the situation has globally improved over the last 20 years with a 17% decline in the total number of undernourished people, **food insecurity remains a concern in many countries**, especially in Africa and in Asia South and East. One in four children in the world shows signs of stunting¹. Malnutrition, through a deficient or improper diet (the case of obesity, for example), can also be one of the consequences of poverty and a major public health issue in a number of growing countries.

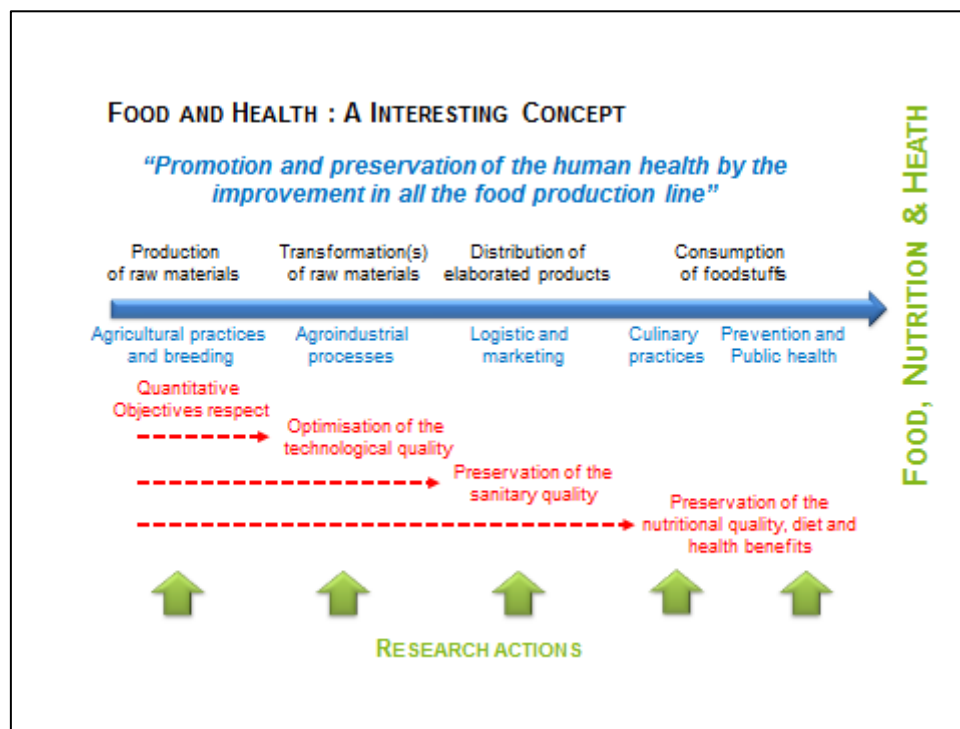
Four major structural causes are behind failure in food security. Their identification permits mobilization of public and private stakeholders in order to analyse the phenomena and provide solutions.

- a. *Issues related to climate and environment:* Ecosystem degradation, depletion of natural resources, failure in matter of prevention and management of natural disasters.
- b. *Issues in the fields of agriculture, collection and processing of products, distribution and consumption:*
 - Low performance of agricultural production due to a deficiency of facilities, and to a lack of agricultural education;
 - Lack of agricultural innovation in vegetal and animal domains, in order to adapt production to a variety of natural settings;
 - Waste of food at all stages of the food chain, due to inadequate storage capacity in particular;
 - Preservation of health and nutritional product quality;
 - Optimization of agro-industrial processes in various contexts.
- c. *Demographic and social factors:* Population growth, evolution of feeding behaviours -onset of childhood obesity by malnutrition in developing countries for example, lack of effective social protection.

¹ 2013 Report, MDG

- d. *Governance*: Public structures in many poor countries do not ensure access to basic foodstuffs without discrimination. Furthermore, the lack of structure in the agricultural industry, combined with market mechanisms and geopolitical issues can lead to speculation on commodity prices, exacerbate inequalities, and finally cause conflict and political instability.

All scientific disciplines can contribute to address these issues, e.g. the social sciences, medical sciences, engineering sciences, agricultural sciences. Attention is drawn to the fact that the proposed research projects must demonstrate how they are particularly relevant to populations in precarious situations.



2 IALU Research Theme : *Sustainability and the Environment*

Focus Area: *Water Treatment and Access to Potable Water*

In the 2013 report “Progress on sanitation and drinking-water”, the World Health Organization emphasizes that **access to drinking water is a prerequisite for success in the fight against poverty** and hunger in the world.

Still, a third of the world population drinks unhealthy water, and 800 million people have no access to drinking water. This situation is particularly worrisome for people living in Africa, South Asia, and to a lesser extent in South America. Furthermore, nearly 80% of wastewater in the world is not properly treated.

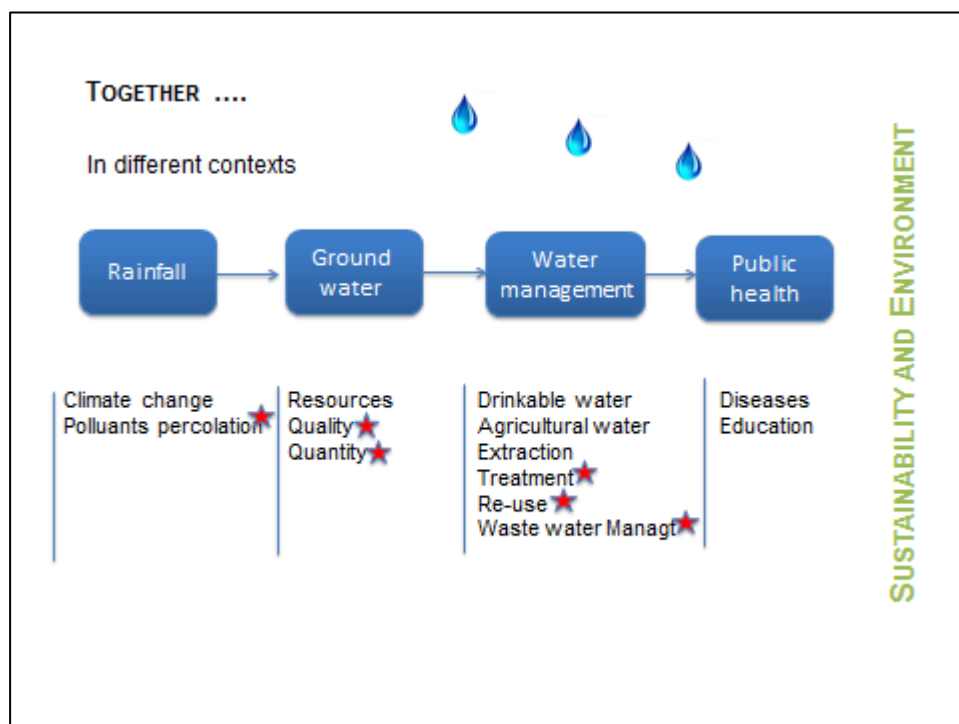
Freshwater only represents 3% of global water reserve. Water is a precious resource, especially as it is not evenly distributed. In 2030, nearly half the world's population could face water scarcity, and demand could exceed supply by 40%. Solutions must be found to this matter of accessibility and the unsustainable use of water. Water management, through preservation and fair use, is one of the major challenges of this century.

To address this challenge, research must be conducted at different levels. They concern in particular the understanding of:

- a. climate change and its impacts, like major weather events (floods, droughts...), and especially their consequences, and how to prepare for it;
- b. the available resource, in order to assess the quantity and quality, dynamics in time and space, new opportunities through the desalination of seawater or remediation by plants for example;
- c. water management and particularly its accessibility, sanitization, use (agricultural, industrial or populations) and reuse;
- d. impacts of water quality on public health, and of preventive actions to lead in order to educate the public about good practices;
- e. models of governance, conflicts and cooperation.

Research programs can be conducted in specific contexts or be compared between sites. They can also play a part in qualifying and quantifying water stocks, analysing dynamics, searching of new biological solutions and/or technologies, improving existing processes, or adapting processes to specific context.

Finally, these research programs can collect contributions from researchers in different fields, such as the life and earth sciences, engineering, humanities and social sciences, and medicine.



3 IALU Research Theme : *Education and Learning Innovations*

Focus Area: *Access to Education - Innovative Alternatives to Promote Inclusion*

Background

According to Humanium (2014), access to education is a challenge for millions of children around the world. Humanium stated that “more than 72 million children of primary education age are not in school and 759 million adults are illiterate and do not have the awareness necessary to improve both their living conditions and those of their children”. The United Nations global education initiative called education “the basic building block of every society (that is) a fundamental human right, not the privilege of the few (and is) the single best investment . . . towards building prosperity” (Ki-moon, 2012, p. 4). Clearly access to quality education is a societal issue of grave significance for children and adults across the world.

From the founding of the Brothers of the Christian Schools over three centuries ago, access to quality education has been critical to the Lasallian Mission. However, the financial burden imposed by the costs of providing a Lasallian education creates serious impediments to access. Although education may be expensive, thus limiting access for poorer sectors of society, Lasallians around the world have creatively sought to bring educational opportunities to those marginalized by society.

Since access to quality education is considered to be a universal right, Lasallian efforts have not been limited only to making it possible for children from marginalized sectors of society to enter Lasallian schools as regular, fulltime students. Historically, students from diverse segments of society have been welcomed into Lasallian schools. Creating diverse, inclusive learning communities, Lasallians focus on creating transformative educational opportunities for students across social strata to enrich student development and promote social justice. Indeed, as noted in Circular 461 (2010), “association exists *for* the educational advancement of the young, especially those who are poor” (p. 59), so access for the poor remains central to the Lasallian Mission.

Exploring Innovative Alternatives

Given our Lasallian Mission and this background, the exploration of innovative alternatives to promote access to education, especially among the marginalized, has been identified as one of three areas for focus of upcoming Lasallian research. Researching innovative alternatives to enhance access for the poor and/or marginalized to Lasallian schools and to promote inclusion in Lasallian education are critical to the future of the Lasallian Mission and to society.

Possible mechanisms for increasing accessibility of Lasallian education for the poor and marginalized might include:

- a. Learning materials (e.g. textbooks, reference materials, laboratory sheets, films and documentary videos, modules for iPads/tablets) that would be accessible and distributed for free or at subsidized prices;
- b. Lasallian teachers, and even university students, teaching in educational venues outside of Lasallian schools, such as public schools or in venues of non-formal education;
- c. Alternative delivery models including use of E-learning materials (web-based learning modules, CD-based learning modules) in distance learning or blended learning modes or in alternative models such as an open-university;
- d. Collaborative learning opportunities to promote global awareness in Lasallian education.

The above are offered as a sampling of possible alternative modes to promote access to quality, Lasallian education. Any such socio-academic intervention would require impact studies, reviews and assessments to gauge the possible impact and benefit afforded by each intervention, and more importantly to explore whether the learning that occurs via these alternate learning modes is in fact happening as planned. Analysis of educational outcomes and impact will be critical to creating support for building and sustaining viable programs based on alternative mechanisms to increase accessibility in Lasallian schools worldwide.

Call for Proposals

Joint collaborative research proposals are being solicited that would bring IALU member schools together to explore innovative alternatives to promote access in Lasallian schools worldwide. The call for proposals offers a challenge to draw expertise from diverse disciplines, including education and its sub-disciplines (e.g. educational measurement, educational psychology, educational leadership and management) as well as those in fields such as education economics, child psychology, instructional technology, computer science, electronics, information science, marketing science, and other disciplines. In addition to disciplinary diversity, the call challenges Lasallians worldwide to reach out to other Lasallians to create proposals of potential significance across a broad societal scope to create the greatest impact.

Access to Education: Together and By Association
"Association exists for the educational advancement of the young, especially those who are poor"

Innovative Alternatives:

Innovative Learning Materials	Alternative Venues	Alternative Delivery Models	Collaborative Models
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Possible Research Approaches:

- Analysis of Educational Outcomes
- Impact Studies
- Assessment of Student Learning



Education and Learning Innovations

References

- Brothers of the Christian Schools, General Council (2010). *Circular 461: Associated for the Lasallian Mission . . . an act of Hope*. Rome, Italy: Author. Retrieved January 15, 2014 from <http://lasallian.info/doc/Circular%20461.pdf>.
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