

SOWING EDUCATION – HARVESTING DEVELOPMENT

FOR A
SUSTAINABLE
FUTURE.





Foreword by the management

LN EDUCATION GROUP

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**SUSTAINABLE
DEVELOPMENT
GOALS**



„EDUCATION: THE KEY TO CHANGE: OUR COMMON PATH INTO THE FUTURE“

DEAR READER,

Around the world, education and qualified labour are the key to change and progress. We, the LN EDUCATION GROUP, see ourselves as builders of bridges who address the unique needs and potential of local education systems. Our mission is to deliver first-class education solutions that support the individual goals and dreams of children, young people and adults while simultaneously contributing to the achievement of the global Sustainable Development Goals laid down in the UN Agenda 2030.

Africa is an integral part of this Agenda, and it is our honour and duty to play a meaningful part in the sustainable development of the continent, working hand in hand and on an equal footing with our African partners.

AN ALLIANCE FOR INNOVATION AND PROGRESS

The LN EDUCATION GROUP is made up of three companies that have been operating successfully in the education market for decades: LUCAS-NÜLLE, PHYWE and VOCANTO. These companies unite their strengths and expertise to bring innovative education projects to life around the world, implementing state-of-the-art technologies and teaching materials to meet the needs of today and the requirements of tomorrow.

With more than 100 partner companies worldwide, we bring high-quality education solutions to virtually every corner of the globe to support the development of skilled local labour. Our profound understanding of local cultures, challenges and needs ensures perfectly tailored and educationally coordinated solutions.

GROWTH WITHIN A STRONG EDUCATIONAL LANDSCAPE

Our approach is aimed towards strengthening the educational programmes in the individual countries. We are here to support, to share and to learn. Our solutions offer African educational institutions the tools to achieve their goals and pave the way for the future. Together, we are shaping Africa's educational landscape for a sustainable tomorrow.

Kind regards,



Rolf Lucas-Nülle
Founder & CEO



Jörg Siekmann
CEO

ADVANCING EDUCATION TOGETHER

CONCEPTS DEVELOPED IN PARTNERSHIP

With modern solutions for the whole journey.



QUALITY EDUCATION

With their refined portfolio, the companies of the LN EDUCATION GROUP are particularly committed to the fourth Sustainable Development Goal of the UN 2030 Agenda: "quality education". Taking individual concepts as our starting point, we adapt our globally successful training systems and technologies to the realities in each individual region, to achieve the best possible progress within the various educational structures.



JOINT REALISATION

The LN EDUCATION GROUP is in constant dialogue with our experienced partners on the ground. We have had solutions for the big issues of the future such as Automation/Industry 4.0, telecommunications and renewable energies in our portfolio for many years. Working in close cooperation with our customers and contacts in each region, we develop a suitable concept for each project based on international best practice.



LATEST EDUCATIONAL STANDARDS

The interdisciplinary educational competence of our companies means that we cover an exceptionally broad range of expertise. Both the learning experience and the imparting of knowledge and skills is based on our innovative Real Experience Learning. Our learning philosophy is geared towards the active involvement of the learner with all their senses, so they can build up lasting knowledge through real-life experiences, always with the aim of achieving the highest possible level of competence. Real Experience Learning uses a combination of theory and practice, active exercises and repetition, as well as a sense of achievement through teamwork between learners and teachers. This opens up entirely new areas of experience for everyone involved in education.



FROM AN INDIVIDUAL BUILDING BLOCK TO THE WHOLE EDUCATION CHAIN

From school education to technical vocational training right through to university teaching, research and further education – the solutions of the LN EDUCATION GROUP companies provide support along the entire education chain. This starts with exciting experiment equipment sets for the smallest groups of interested participants and goes right up to fully equipped laboratories, which of course can be adapted to the technical conditions on site – even as a turnkey solution, if required.



LN EDUCATION GROUP

THE FUTURE OF EDUCATION
IS GATHERING PACE

EDUCATION SOLUTIONS

Education solutions should be one thing above all else: future-oriented and equal-opportunity. The LN EDUCATION GROUP sees itself as an accelerator of education projects. To this end, the companies belonging to the Group have pooled their unique strengths in the education sector on the international market: Technology (LUCAS-NÜLLE) and Science (PHYWE). Doing so allows us to develop pioneering innovations and simultaneously cater to the megatrends in this era of digital transformation.

We always coordinate our education programmes and solutions with ministries and development organisations to ensure a constructive starting level. This is why we work with long-standing partners around the world to bring the best regional education solutions for our customers to virtually every corner of the globe and fulfil our mission.

VISION

“ To heal our planet through global technical and scientific education. The UN 2030 Agenda serves as a long-term road map for the challenges that need solving. ”

MISSION

“ Our mission is to help with the training, qualification and solution of technical and scientific educational tasks and the effective realisation of these, achieving the best possible outcome in the process. ”



“ Africa is experiencing rapid growth and there is an increasing need to achieve the goals set and measures defined along the entire education chain. The holistic solutions offered by our Group help to create progressive educational programmes, thereby shaping a promising future. ”



Jörg Siekmann
CEO

LUCAS-NÜLLE

LUCAS-NÜLLE develops and produces training systems for technical professions in key technologies. The systems consist of a physical training module and digital courses on a dedicated, interactive and modular learning platform with content optimised for educational success. To ensure the personal development of students and trainees, our training systems offer practice-oriented training while at the same time imparting knowledge and expertise.



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PHYWE

PHYWE has been developing, producing, supplying and installing scientific equipment, experiments and solution systems for academic education and scientific research for over 100 years. Modern e-learning systems, software and a broad service spectrum covering training courses, installation services and comprehensive consulting services round off the portfolio.



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REAL EXPERIENCE LEARNING

THE FUTURE IS EXPERIENCE LEARNING

Real Experience Learning: for maximum competence.

REAL EXPERIENCE LEARNING

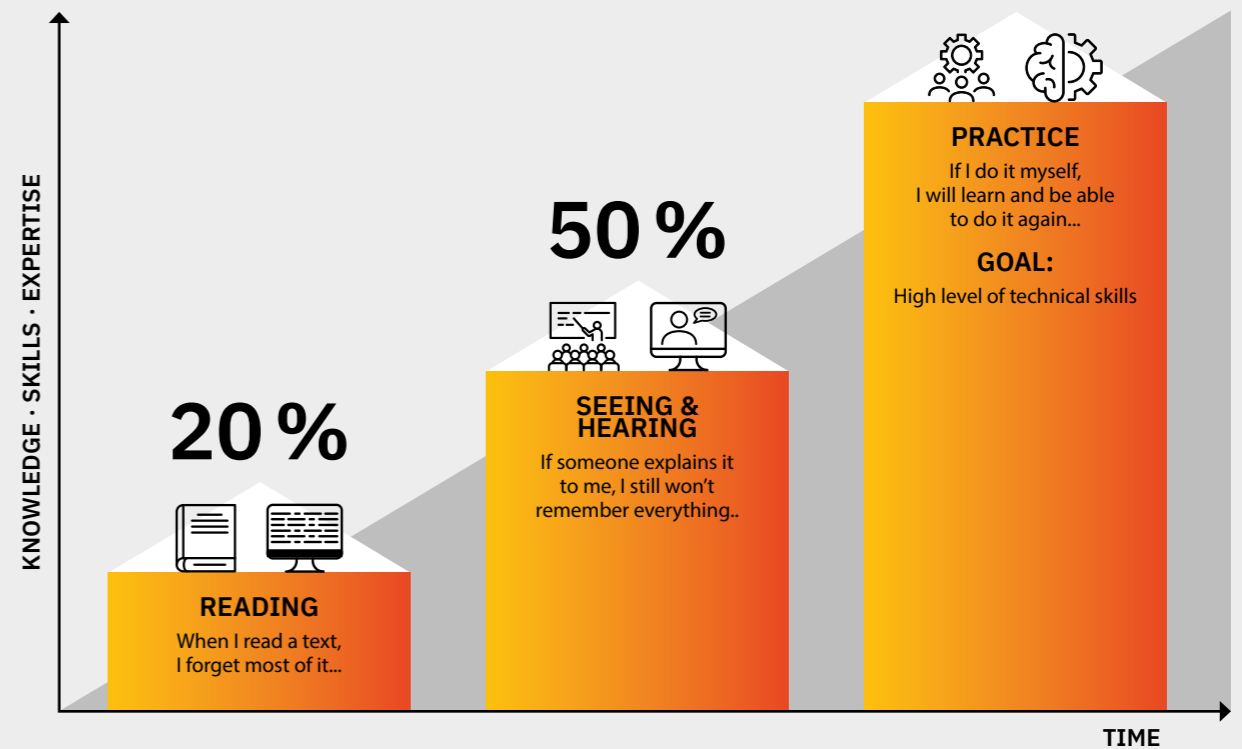
Real Experience Learning (RXL) stands for our philosophy of learning through direct experience in real-life and situations rooted in practice, with the aim of achieving the highest possible level of competence. RXL is an educational concept blending traditional learning methods with real, practical experience. The fundamental principle behind it is that practical and emotional experiences are the main drivers of motivated and effective learning.




Real Experience Learning emphasises how important it is for the learner to be proactive and personally involved, in order to gain a deeper understanding and master the learning material for the long term. The main focus is on experiencing the knowledge and skills acquired directly and in real-life situations. Depending on the topic, learners achieve this through practical exercises, simulation, training, experiments, tests and other experience-oriented learning methods.

HOW WE LEARN

THE PATH TO COMPETENCE: RXL



A photograph of students in a workshop or laboratory setting. A young woman in the foreground is smiling and looking towards the camera, while a young man stands next to her, looking down at a task. In the background, other students are working at tables. The scene is lit with warm, orange-toned light.

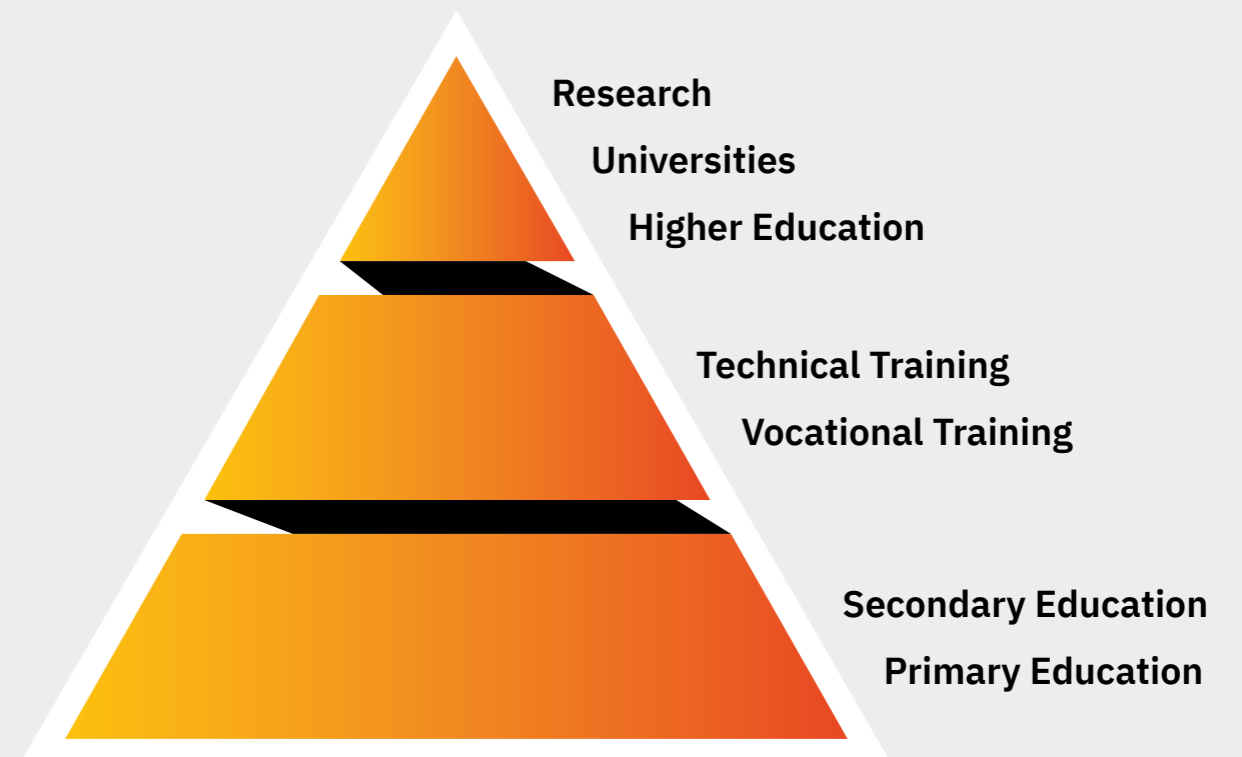
INNOVATIVE EDUCATIONAL CONCEPTS

FOR A WIDE VARIETY OF TARGET GROUPS

MULTIDIMENSIONAL LEARNING ...

- **Learning age** (5 to > 30 years old)
- **Learning fields** (physics, chemistry, automotive, electrical, ...)
- **Learning tools and hardware**
- **Learning media** (analog, digital)
- **Learning settings** (school, company, institute, ...)
- **Learning spaces** (classroom, laboratory, workshop, ...)
- **Types of learning** (alone, group, in-person)
- **Educational institutions** (elementary to science)
- **Vocational training/educational professions**
- **Academic studies/various degree programmes**

... ALONG THE ENTIRE EDUCATION CHAIN

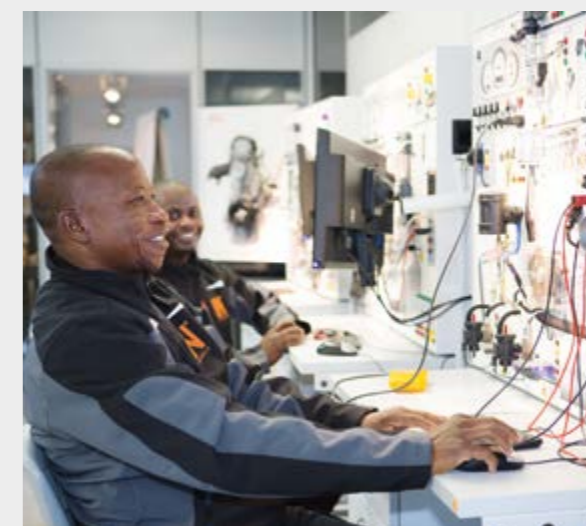


THE VARIOUS PROGRAMMES

- **Basic education** (primary schools, secondary schools)
- **Vocational college**
- **Colleges and Universities**
- **Further education** (vocational college, university, research)
- **Adult education** (vocational college, university, research)
- **Companies** (vocational training, corporate training programmes)
- **Train the trainer**

CERTIFICATION

- **Instructor certification training**
- **Certification of training centres** (such as IMI, TÜV, Dekra, etc.)



OUR EXPERTISE

FIGURES, DATA, FACTS

Countries active
worldwide: > 100

Countries in Africa: > 35

Projects in Africa: > 100

Solutions sold: > 1.000

Years of experience: > 100

93 % satisfied or very
satisfied customers



Support for educational
initiatives

Intercultural cooperation

Designed & Engineered
in Germany

THE ADDED VALUE FOR YOU

WORKING IN A SPIRIT
OF PARTNERSHIP



THE PATH TO YOUR SUCCESSFUL PROJECT

Translating your individual requirements into practice is just a step away:



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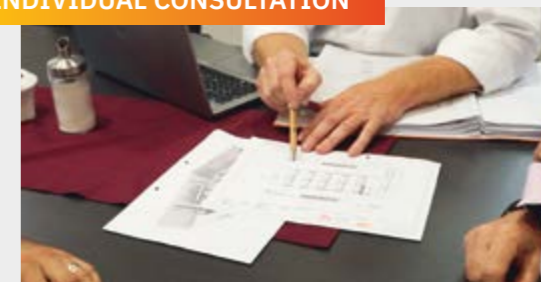
OUR HOLISTIC APPROACH

We offer our educational projects as a complete package, which means we advise our customers before the project even begins. Individual discussions and close cooperation – at your premises or our headquarters in Germany – lead to an offer that matches your needs and requirements. As the financial resources needed to implement high-quality education projects around the world stem from a wide range of sources, the LN EDUCATION GROUP also provides support in clarifying issues with the banks and contacts involved.

Once the contract has been awarded, we will support you throughout the entire project. Our local partners on the ground will be there to assist you whenever you need them. As soon as your equipment arrives, we will be happy to install it and put it into operation for you, as well as training your trainers on how to use it. After handover, it goes without saying that we continue to provide individual advice and technical support.



INDIVIDUAL CONSULTATION



PRODUCTION AT OUR PLANTS IN GERMANY



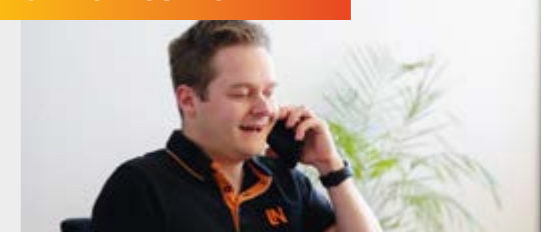
DELIVERY AND INSTALLATION ON SITE



TRAIN THE TRAINER: Training your trainers and employees to ensure successful instruction



INDIVIDUAL ADVICE AND TECHNICAL SUPPORT





DISCOVER OUR VARIETY

With our product range and strong partners, we cover a broad spectrum of professions and fields. We support you in these areas with the expertise you need to ensure rapid success for your projects.

PROFESSIONS AND FIELDS COVERED

1. NATURAL SCIENCES AND BASIC SCIENCES FOR ENGINEERING, MEDICINE AND TECHNOLOGY
2. CIVIL ENGINEERING
3. BUILDING TECHNOLOGIES
4. MECHANICAL ENGINEERING
5. AUTOMOTIVE MECHANICS AND MECHATRONICS
6. AGRI-FOOD, AGRO-INDUSTRIES
7. RENEWABLE AND CONVENTIONAL ENERGIES
8. ELECTRIC DRIVES
9. MECHATRONICS, AUTOMATION, PRODUCTION ENGINEERING
10. ANALYSIS AND MEASUREMENT LABORATORY
11. MEDICAL TECHNOLOGIES
12. NETWORK AND TELECOMMUNICATION
13. MINING TECHNOLOGIES

ADDITIONAL FIELDS ON REQUEST

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NATURAL SCIENCES AND BASIC SCIENCES FOR ENGINEERING, MEDICINE AND TECHNOLOGY

- Physics / Chemistry
- Biology / Geology
- Fundamentals of electricity
- Fundamentals of analog and digital electronics

With well-equipped physics, chemistry and biology laboratories and technical systems, you will give future generations a solid foundation.



2

CIVIL ENGINEERING

- Static analysis
- Field measurements
- Strength and testing of materials
- Fluid mechanics and hydraulics
- Environmental engineering
- Cement and concrete
- Road construction



3

BUILDING TECHNOLOGIES

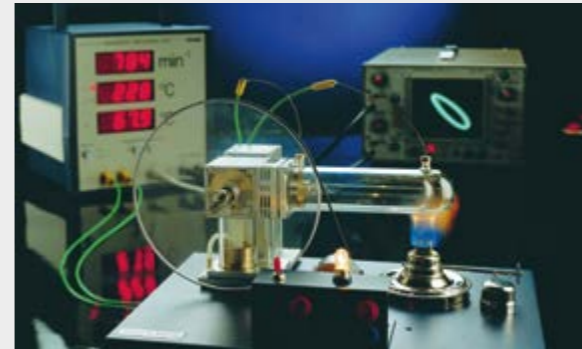
- Building electricity, Smart-Home Technology, Alarms
- Building energy efficiency
- Renewable energies, Refrigeration and air conditioning
- Plumbing, Welding, Masonry, Construction
- Joinery, Carpentry



4

MECHANICAL ENGINEERING

- Technical drawing
- Metal treatment
- Thermodynamics
- Manual machines
- Digital lathes, Digital milling machines
- Pneumatics and hydraulics
- Preventive maintenance



5

AUTOMOTIVE MECHANICS AND MECHATRONICS

- Automotive mechanics
- Automotive electronics and electricity
- Electric and hybrid vehicles
- Automotive diagnostics
- Private and industrial vehicles, Heavy goods vehicles, ...



6

AGRI-FOOD, AGRO-INDUSTRIES

- Scientific laboratory equipment
- Manual and automated agricultural tools
- Preservation and packaging techniques
- Water treatment
- Irrigation technology
- Agri-food chain production training
- Soil and product analysis
- Specific agronomy



7

RENEWABLE AND CONVENTIONAL ENERGIES

- Photovoltaics, Wind turbines
- Solar thermal, Heat pumps
- Conventional power stations
- Solar pumping and irrigation
- Micro-grid, Smart Grid Scada
- Complete electricity network



8

ELECTRIC DRIVES

- Basics of electrical machines and their controls
- Control techniques and power electronics
- Simulation of industrial loads (pump, calender, compressor, etc.)
- Safety techniques and relays, Preventive maintenance
- Contactor or PLC control
- Various industrial applications



9

MECHATRONICS, AUTOMA- TION AND PRODUCTION ENGINEERING

- Basics of automation and regulation
- Pneumatics and hydraulics with conventional and electrical control
- Advanced automation, mechatronics, robotics
- Control and safety technology
- Industrial bus systems, RFID, HMI
- Maintenance and preventive maintenance
- Production lines, Industry 4.0, Smart Factory



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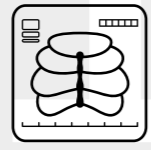


ANALYSIS AND MEASUREMENT LABORATORY

- Interdisciplinary analysis
- Measurement techniques
- Compliance with standards, Technical conformity

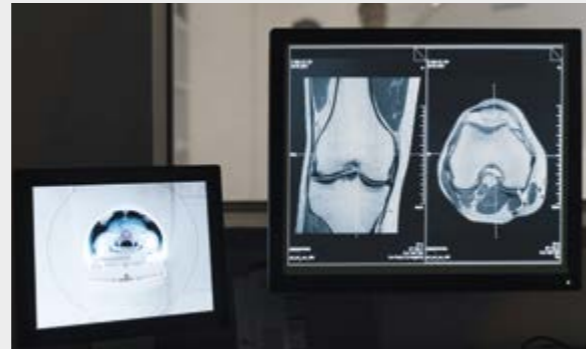


11



MEDICAL TECHNOLOGIES

- Basic biology and chemistry
- Radiology
- Maintenance of medical equipment



12



NETWORK AND TELECOMMUNICATIONS

- Basics of telecommunications
- Microcontroller and microcomputer technology
- Transmission / Antenna techniques
- Conventional cables and fibre optics
- Internet networks, Cybersecurity
- Connected objects, Internet of Things



13



MINING TECHNOLOGIES

- A wide range of interdisciplinary training
- Geology, Basics of materials, Analysis techniques
- Drive technology, Hydraulics
- Electrical control, PLC, HMI, Industrial buses
- Electrical energy, Renewable energies
- Technologies for rail and road vehicles
- Maintenance and preventive maintenance
- Other mining technologies



FROM THE VISION TO EDUCATIONAL SUCCESS:

HOW SUSTAINABLE EDUCATION BECOMES REALITY

A visual journey through various projects along the entire education chain. By implementing our high-quality education solutions in partnership and in line with the latest educational standards, the training and educational projects were systematically completed.





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