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# Lucubrate

Magazine

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"I believe that the school must represent present life – life as real and vital to the child as that which he carries on in the home, in the neighborhood, or on the playground." *John Dewey*

## LUCUBRATE MAGAZINE

The world is changing all around us. A skilled population is the key to a country's sustainable development and stability. We know that obtaining a quality education is the foundation to improving people's lives and sustainable development. To contribute to skill people over the next ten years and beyond, we must look ahead, understand the trends and forces that will shape our business in the future and move swiftly to prepare for what has to come. We must get ready for tomorrow today. We will make it possible for youth and young adults all over the world to gain skills they can use in the labour market or to create their own jobs. We will make it possible for every person to have lifelong learning opportunities to acquire the knowledge and skills they need to fulfil their aspirations and contribute to their societies.

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**Publisher:** Lucubrate

Street address: Eva Nansens vei 5, Fornebu, Oslo, Norway

Mail Address: PO Box 1048, 1307 Fornebu, Norway

Web: <https://lucu.nkb.no/>

Email: [lucubrate@nkb.no](mailto:lucubrate@nkb.no)

**Editor:** Mr. Karl Skaar, Norway

**Design:** Architect. Iman Ahmed, United Arab of Emirates

**Marketing Manager:** Ms. Sarah Andy, England

**Assistant journalist:** Mr. Igberadja Serumu Igberadson, Nigeria

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»  **Rosemary Seninde**  
is the State Minister for Primary Education in the Ugandan Cabinet. She was appointed to that position on 6 June 2016. She has been Wakiso District Women's Representative in the Parliament of Uganda for many years.

»  **Nita Temmerman**  
is an invited Visiting Professor to a number of universities in Asia, Australia and the Middle East. She has recent work experience in the education sectors in many countries, Malaysia, Vietnam, Singapore, Thailand, Canada and Japan.

»  **Karl Skaar**  
He is a highly successful professional, with a high degree of entrepreneurial flair, demonstrated through an outstanding record of achievement in formulating business strategies and spearheading complex projects.

»  **Robert Okinda**  
is the Chair of AFQueT and a coordinator of INVEST Africa. He has experience in eLearning, dating back to 2004 when he started integrating ICT in education. He has designed and developed several e-Learning courses.

»  **Angela Mirembe Semwogerere**  
has 10 years of experience working in the IT / Telecommunication Industries. She is seasoned in this field and is an authority in matters concerning digitization, youth, and innovation.

»  **Francis Macharia**  
He is a registered eLearning practitioner who is skilled in peer review work on eLearning courses. He works with a middle-level Government TVET institution in Kenya.

**Find out more**

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## Technological Change Creates Changing in Jobs and Tasks

*The current wave of technological change based on advancements in artificial intelligence (AI) has created widespread fear of job losses and further rises in inequality. A paper published by International Labour Organization (ILO) discusses the rationale for these fears, highlighting the specific nature of AI and comparing previous waves of automation and robotization with the current advancements made possible by a wide-spread adoption of AI.*

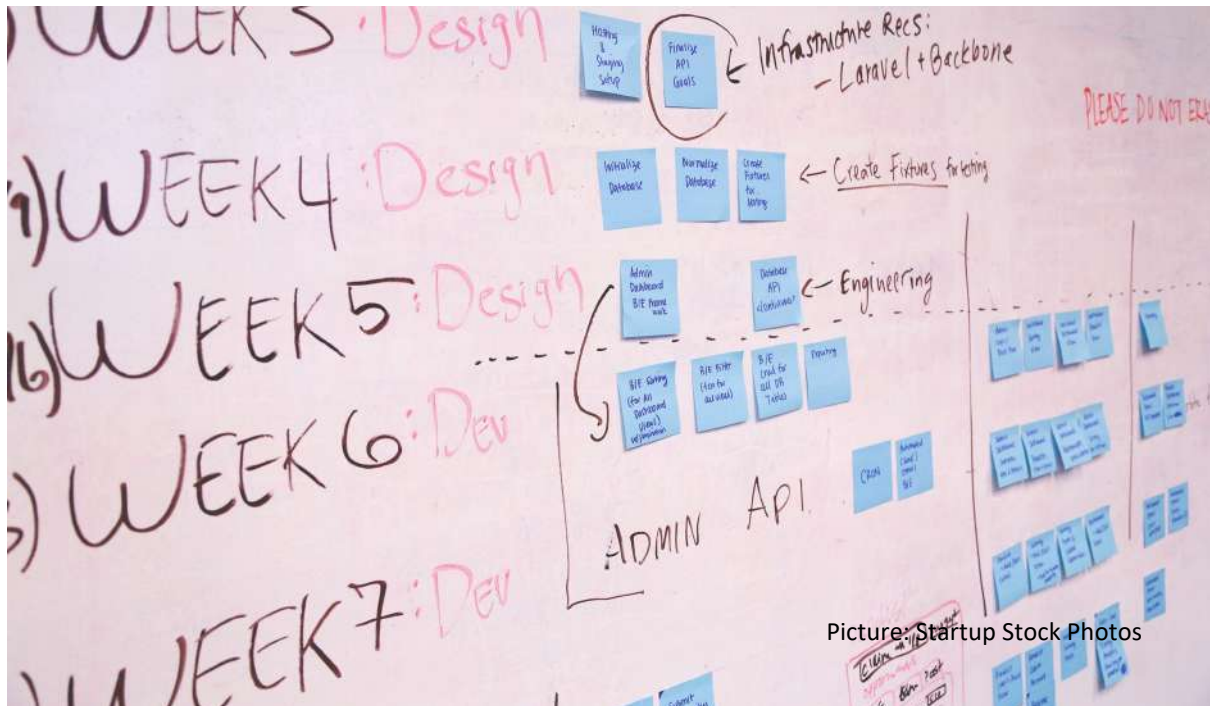
This article is a smaller part of a chapter about jobs and tasks. The heading of that part of the document is Changing jobs and tasks.



Photo: Fox

The paper argues that large opportunities in terms of increases in productivity can ensue, including for developing countries, given the vastly reduced costs of capital that some applications have demonstrated and the potential for productivity increases, especially among the low-skilled. At the same time, risks in the form of further increases in inequality need to be addressed if the benefits from AI-based technological progress are to be broadly shared. For this, skills policy are necessary but not sufficient. In addition, new forms of regulating the digital economy are called for that prevent further rises in market concentration, ensure proper data protection and privacy and help share the benefits of productivity

growth through a combination of profit sharing, (digital) capital taxation and a reduction in working time. The paper calls for a moderately optimistic outlook on the opportunities and risks from artificial intelligence provided policy-makers and social partners take the particular characteristics of these new technologies into account.



Picture: Startup Stock Photos

## Changing Jobs and Tasks.

Jobs are constituted by a set of tasks. If some of these tasks are automatized, job profiles might change by adding new tasks or modifying existing ones instead of suppressing a job entirely. The task description of an administrative assistant over time can demonstrate how similar jobs continue to perform certain tasks that have not (yet) been automatized alongside other, new tasks that either did not exist before or were performed by a different group of workers. Hence, whether or not jobs disappear depends on whether it remains profitable to group certain tasks into specific job profiles and hire workers specifically for these (new) jobs, which is a question more of demand for particular products and services that these jobs are supposed to deliver than of supply of skills to fill the jobs.

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## Different Tasks Will be Handled Differently in Different Countries

Importantly, cross-country differences exist regarding how jobs are being designed and tasks regrouped into jobs. Tasks have different characteristics regarding their training, supervisory and production requirements, which are not necessarily aligned. Depending on the importance a company puts on training its workers, supervising them or aligning their workflows, different tasks may be regrouped to jobs from one company to another. Partly, this will depend on the country characteristics regarding education and training infrastructure, tax incentives and social

benefits systems. Hence, even companies operating in the same industry but in different countries might react to institutional differences with a very different set-up of their internal work processes and job profiles, as exemplified by the differences between Apple and Samsung in the way they externalize their production chains. Consequently, whether the automation of tasks will lead to jobs disappearing is as much a technological question as it is an institutional one and cannot be determined a priori by looking at the automation process alone. Recent evidence seems to confirm the importance of institutional factors in determining the outcome of occupational changes, as seemingly similar patterns of job polarization across countries can be driven by different factors.



Photo: Pixabay



## **We Still Need Pilots in the Aeroplanes**

Even when tasks can be automated they might not disappear altogether. Rather than executing a particular task, for instance, an employee might be charged to ensure that the machine is conducting the task properly and to intervene in case of an emergency or error. In the case of air pilots, for instance, the introduction of automatic pilots has not made obsolete their role. Even though on average a pilot only flies a plane for roughly seven minutes during an entire flight, having a human sitting at the control panel is as essential as before in order to intervene in extreme situations or sudden disruptions or in technical malfunctions not foreseen by the autopilot (such as a simultaneous breakdown of both engines).

## **Automation Creates Needs For New Skills.**

Similarly, it might still require a worker to ensure that machines are properly parameterized and set up, especially when orders change or a new production line needs to be set up. Also, the relative time spent on each individual task might change: Thanks to supporting by AI on diagnosing diseases, doctors, for instance, might spend less time on analysing symptoms and more time on ensuring a patient's well-being and individual needs. Either way, automation of a task might not necessarily lead to that task no longer requiring human assistance.

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Rather, the question becomes whether it remains profitable to bundle a set of tasks to a specific job, as well as how quickly a worker can shift within the current job to perform slightly modified tasks or task sets. If that entails requiring new skills that are costly to learn, automation can be expected to lead to inequality within occupations rather than across..

The article is a part of Chapter 3 (p9+): The economics of artificial intelligence: Implications for the future of work, International Labour Organization (2018)

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Multimedia-based electronic learning has become a tool used to provide access to education for multiple segments of the population, which otherwise would have little to no access to it. While eLearning is integrated into curricula early in the digital revolution, in many countries, it is just beginning to address the opportunities and challenges web-based learning may bring.

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## Big Data that are Sellable to Different Users of Intangible Asset Information

By Peter Welch, Georgia, CEO GlobalCfo.LLC

*The change of the industry in knowledge-based capital (KBC) has been rising significantly in the past decades. Empirical research has shown that investments in knowledge-based capital, i.e. intangible assets, have become key drivers of economic growth across Western economies.*



### DISCUSSION PAPER: PATENT/INTANGIBLE ASSET BANK (PB-IAB)

#### BASIS ASSUMPTIONS & OBJECTIVES :

- Enlarge the concept of the "patent bank " ( as described by Andreas in the basic document that you created ) towards IC so Entity IC could also have in the concept..
- Create a common language between SME's and financiers in order to set between both parties



Accounting Series – article No: 35

Accounting Theory – Advanced Part 25

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the right expectations.

- Perfect guidance of the use of the money an SME gets (loan, equity, grant or otherwise ) from a financier is better than a good guarantee scheme.
- A good guarantee scheme is useful to " convince " banks, VC's and other financial institutions to supply SME's with the demanded money. In many cases, the guarantee instrument becomes the only reason why a bank, VC or other financial institution will give a loan or equity. We want, in our concept of the PB-IA bank, make sure that the money provider understands the way the SME is going to use the money and understands how these financial injections will create more innovation and by definition more added value ( intangible assets ) and more revenue, based on these assets.
- In our model, we will make sure that knowledge transfer to the SME's will be realized.
- In case of default, we will foresee an exit strategy so the loan/ equity givers will not lose their money.
- All the members of the consortium need to make a profit based on the added value they provide in this model. The basis of collaboration will be a JV between Intracom, Entity IC and JRC.
- The model we will develop must be functional for 1 SME as well as for a large number of SME 's. In the case a large number of SME's will be involved in using our model, we will have some spin-off advantages such as
  - a potential 'ranking " tool, based on the real intangibles assets and revenue streams that are originated by those assets. It could become a kind of S&P / Moody's/ Fitch group of SME's landscape if there are >50K companies involved.



- Big data that are sellable to different users of intangible asset information of SME's
- It is our ( Intracom & Entity IC ) objective to develop a model that can be used for 1 SME as well as for the follow up of a large number of SME 's.
- It is also our ( Intracom & Entity IC ) objective to develop a model that can be used with only patents ( + IC related assets to that patent ) as collateral with a guarantee concept as basis , till an longitudinal IC/IP evaluation based on the 10 step approach ( Entity IC ) with financing and coaching based on a nearly NO-risk model . ( knowledge manager inside )
- Once the model is made, there will be an annual evaluation of the functioning of the model and the model will also be open for new partners in the model, were others can stop their participation.
- Any model we will develop cannot cannibalize our( Intracom & Entity IC ) existing market and market approach. The model needs to offer extra value for both companies and should not use too many resources in setting it up and running it. On the other hand, all the members of the consortium need to know their role ( for which they will be compensated ) in terms of "responsibility and deliverables " and all of that to a high standard of professionalism.



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- We need to introduce the model in a modular step by step approach so we can grow into the model as we go forward which will give us the opportunity to add new elements to the model as we move forward. On the other hand, this modular approach should not be a blockage to leverage the potential earning we can generate with it.
- The objective will be to develop an automated system ( to be developed by the 3<sup>rd</sup> party ) with which we can do a quick scan of the intangible assets of a company ( present versus future value and tacit versus explicit ) on a regular basis and identify their needs in the innovative process ( could be financing , protecting advise , patent registration , litigation advise , managing their IC etc ) .
- The consortium will organize the continue measuring of the performance of the companies and the needed consulting and the guarantees are needed.
- All the upfront investments by the partners in the consortium (Intracom, Entity IC, ICT company, setting up a fund by JRC, legal advice, etc ) will be covered by an initial investment ( equity or grant or both ) into the joint venture (Intracom, Entity IC & JRC )



Photo: Ingo Joseph

## OVERALL CONCEPT

### Excellence

### Objectives

The change of the industry in knowledge-based capital (KBC) has been rising significantly in the past decades. Empirical research has shown that investments in knowledge-based capital, i.e. intangible assets, have become key drivers of economic growth across Western economies. IPR and intangibles make up 90% of corporate networth<sup>2</sup>, solutions for using such assets as collateral are not existing in Europe even though there is a huge need, especially for SME operating Key Enabling Technologies (KET).

The crucial actors in this process are the small and medium-sized enterprises (SMEs), especially start-ups, who develop knowledge assets and exploit their increasing returns to scale. Nonetheless, young SMEs may face a number of difficulties in raising the capital necessary to grow, essentially because they are subject to high risks of failure and they have a very small or non-existing amount on tangible assets but have on the other side a lot of innovation capacity.

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**Mr. Peter Welch**, CEO of GlobalCfo.LLC

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(<http://www.GlobalCfoLLC.Com>).

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## Adult learning outside the workplace

*As the nature of work changes, some workers are caught in the crosshairs of ongoing disruptions in the skills required. As economies rejig to provide the human capital of the next generation, the current working-age population becomes anxious about its job prospects.*



One step toward lessening this anxiety is adult learning aimed at supplying workers who are not in school or in jobs with new or updated skills. However, this approach has shown more promise in theory than in practice. Bad design too often gets in the way. Adult learning can be improved in three ways:

- more systematic diagnoses of the specific constraints that adults are facing
- pedagogies that are customized to the adult brain
- and flexible delivery models that fit in well with adult lifestyles.



## Preparing Adults for the Changing Labor Markets

Adult learning is an important channel for readjusting skills to fit in the future of work, but it would benefit from a serious design rethink. Adult learning programs come in many different forms. This article mainly focuses on three types that are particularly relevant to preparing adults for the changing labour markets:

- programs on adult literacy
- skills training for wage employment
- and entrepreneurship programs.



Photo: KS

## Billion Working-age Adults Have Low Reading Proficiency

Worldwide, more than 2.1 billion working-age adults (ages 15–64) have low reading proficiency. In Sub-Saharan Africa, nearly 61 per cent of workers are not proficient in reading; in Latin America and the Caribbean, this share is 44 per cent. In India, only 24 per cent of 18- to 37-year-olds who drop out of school before completing the primary level can read. Low-Quality education also may

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lead to poor literacy skills (figure). In Bolivia, Ghana, and Kenya more than 40 per cent of 19- to 20-year-olds with an upper secondary education score below the basic literacy level, compared with only 3 per cent in Vietnam. This is a problem. Given the future of work, functional literacy is a survival skill. The economic and social cost of adult illiteracy to developing countries is estimated at more than US\$5 billion a year.

Even with basic literacy skills, many people leave school too early to thrive in work or life. Reasons may be economic or cultural constraints, the low quality of basic education, or both. In 2014 the dropout rate from a lower secondary general education was, on average, 27.5 per cent in low-income countries and 13.3 per cent and 4.8 per cent in middle- and high-income countries, respectively.<sup>30</sup> It is difficult for early school leavers to find jobs or pursue further education later in life without formal certification and training in skills. Similar constraints are also faced by many adults who stayed in school but received a poor-quality basic education.



Photo: Lisa Fotios

## Out of School and Out of Work

Globally, some 260 million people ages 15–24 are out of school and out of work. A pool of unemployed adults is a political risk as well as an economic concern. At times, it leads to a wave of emigration, social unrest, or political upheaval. Insufficient economic opportunities for an increasingly educated population were a major catalyst of the 2010–11 Arab Spring. Changing demographics place additional pressures on the labour market. Many rich countries are trying to equip a smaller, older workforce with new skills for the changing nature of work, to sustain economic growth. Other countries with big youth cohorts are struggling with a low-skill labour force trapped in low-productivity jobs.



Photo: KS

Adult learning programs update the skills and retool and improve the adaptability of older workers. India's Saakshar Bharat initiative, launched in 2009, seeks to provide 70 million adults with literacy. In Ghana, adult literacy programs have yielded labour market returns of more than 66 per cent. The Mexican National



Institute for Adult Education has developed flexible modules to deliver education programs equivalent to primary or secondary education. They are intended to give out-of-school individuals a second chance. Under the World Bank's Nepal: Adolescent Girls Employment Initiative, vocational training for women has increased employment outside of agriculture by 174 per cent. Argentina's Entra21 program is providing adult skills training and internships, resulting in 40 per cent higher earnings for its participants. Kenya's Ninaweza program is offering skills training to young women living in informal settlements in Nairobi. The program has led to a 14 per cent increase in the likelihood of obtaining a job, higher earnings, and more self-confident participants.



Photo:  
Christina Morillo

## Entrepreneurship Programs Do not Create Employment

But many adult learning programs fail to generate a meaningful impact. Adult literacy programs often improve word recognition but fail to improve actual reading comprehension. In Niger, an adult education program increased reading speed, but not to the level required for reading comprehension (the minimum reading speed for reading comprehension is one word every 1.5 seconds). Entre-

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preneurship programs often improve business knowledge, but they do not create employment. In Peru, training for female entrepreneurs improved business, but it did not generate a significant increase in employment. Vocational training for the unemployed often improves short-run earnings but not always long-run employment. The Dominican Republic's Juventud y Empleo (Youth and Employment) program improved noncognitive skills and job formality, but it did not increase employment. And Turkey's vocational training had no significant impacts on overall employment, and the positive effects on employment quality faded in the long term.



Even among successful adult learning programs, the costs are high. In Liberia, even though young women with access to job skills training enjoy higher monthly earnings—US\$11 more than the comparison group—the cost of the program is US\$1,650 per person. Thus 12 years of stable effects must pass for the training program to recoup its costs. In Latin America, a long time is required for some programs to attain positive net present values if their benefits are sustained—for example, seven years for ProJoven (Program for Young People) in Peru and 12 years for Proyecto Joven (Young Project) in Argentina. Adult learning is frequently just one expensive component of a comprehensive package, making it difficult to understand a program's cost-effectiveness. The Chilean Micro Entrepreneurship Support Program boosted self-employment by 15 percentage points in the short run, but it is not clear how much of this can be attributed to the 60-hour business training or the US\$600 capital injection.



Photo: David

## Adult Brains Learn Differently

The two main reasons for low effectiveness are a suboptimal design and an incorrect diagnosis. Adult brains learn differently—and that is not always factored into program design. Because the brain's ability to learn lessons with age, adult learning programs face a built-in challenge: acquiring knowledge when the brain is less efficient at learning. Advances in neuroscience suggest how to tackle this factor. An adult brain's ability to learn is significantly dependent on how much it is used. Adult learning programs have a better chance of success if lessons are integrated into everyday life. In Niger, students who received instruction via their mobile phones as part of an adult education program achieved reading and math scores that were significantly higher than those who did not.

Adults face significant stress, which compromises their mental capacity— and that, too, is not always factored into program design. For adults, emotions are constantly mediated by the demands of family, child care, and work. These demands compete with the cognitive capacity required for learning. In India, sugarcane farmers were found to have a markedly diminished cognitive capacity when they were poorer (during preharvest) than when they were richer (during postharvest). Creating emotional cues linked to learning content—such as goal-setting—can be an effective strategy to increase adult learning. But behavioural tools are rarely integrated into adult learning programs.

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Adults face specific socioeconomic constraints—and, again, these are not always factored into the design of adult learning programs. Adult learners have high opportunity costs in terms of lost income and lost time with their children, but programs often have inflexible and intensive schedules. In Malawi, participation in training resulted in a decline in personal savings for women at a rate nearly double that of men. Distance to training locations and lack of childcare were significant barriers for women trying to complete vocational training programs in India. For adult literacy programs, dropout rates are often high, ranging from 17 per cent in Niger to 58 per cent in India.



Photo: KS

## Low Participation in Adult Learning Programs

Low participation in adult learning programs is a sign that they are not always the answer. In Pakistan's Skills for Employability program, even among poor households who expressed interest in vocational skills, more than 95 per cent did not enrol when given a voucher. Even when the government increased daily

stipends and moved the training centres to villages, enrollment did not exceed 25 per cent. In Ghana, the demand for training by informal businesses is low because most managers do not see lack of skills as a constraint.

Three promising routes to more effective adult learning programs are

- better diagnosis and evaluation
- better design
- and better delivery.

For better diagnosis and evaluation, systematic data collection before program design will identify the most important constraints for the target population. This information is also useful for customizing skills training. Administrative data from India's massive National Rural Employment Guarantee Act program has offered powerful insights into local labour markets.



Photo: Joy Deb

There is tremendous scope for improving the design of adult learning programs using insights from neuroscience and behavioural economics. Both practical exercises and visual aids are effective in adult learning because they help memory. Including motivational tools such as financial rewards, work experience, or frequent feedback have all been shown to boost adult learning. An experiment among young adults shows that offering rewards increases long-term performance gains after training.

As for delivery, flexible adult learning programs allow adults to learn at their convenience. In a voucher program for vocational training in Kenya, nearly 50 per cent of women cited proximity to a training centre as a determining factor in choosing a course. Given competing demands on adults' time, training programs with short modules delivered through mobile applications are particularly promising. Delivering training programs via mobile phones better shields adult learners from potential stigma.



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Adult learning programs are more successful when they are explicitly linked to employment opportunities. One popular way to do this is through apprenticeships or internships that link training to day-to-day experience and provide motivation through the promise of future economic returns. Skills training programs are more successful when the private sector is involved in developing the curriculum or training methods or in providing on-the-job training via internships or apprenticeships. Colombia's Jóvenes en Acción (Youth in Action) program combines classroom instruction with on-the-job training at private companies. The probability of formal employment and earnings rose in the short term and has been sustained in the long run. The program has also demonstrated strong education effects, with participants more likely to complete secondary school and to pursue higher education eight years after the training. The likelihood of their family members enrolling in tertiary education also has increased.



Photo: Christina Morillo

## Combining Training with Cash

The success of adult learning programs may also depend on addressing multiple constraints at the same time. Combining training with cash or capital in some cases is a direct way to boost effectiveness. In Cameroon, 54,000 people who participated in a program that coupled training with financial assistance found employment. Combining skills training with skills certificates, referral letters, and better information about job opportunities also may enhance effectiveness, especially for women. In Uganda, workers with more certifiable, transferrable skills have higher employment rates, higher earnings, and greater labour market mobility. A World Bank program in South Africa is attempting to improve job searches through peer support, text message reminders, and action planning.

Incorporating soft skills or sociobehavioral skills in training design has shown promise. In Togo, teaching informal business owners “personal initiative”—a mindset of self-starting behaviour, innovation, and goal-setting—boosted the profits of firms by 30 per cent two years after the program. This approach was much more effective than traditional business training. For factory workers in India, acquiring skills such as time management, effective communication, and financial management increased their productivity.

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\* The article is from Chapter 4 (p81+): THE CHANGING NATURE OF WORK. WORLD DEVELOPMENT REPORT 2019. The World Bank 2019

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## Creativity and Critical Thinking as Key Human Capabilities Needed in the Workplace of the Future

By Kalrl Skaar

*I came across an article in Forbes\* about the future of work. The article states that the pace of change has never been this fast, yet it will never be this slow again. In the future, the article says, that there will be a blended workforce of humans and robots. In this future, human skills will move from linear to Z-shaped.*



Illustration:  
Lucubrate Magazine

### The Future of Skills Will Move from Linear to Z-shaped Skills

This notion of developing cross-functional skills is not new, in fact, the notion of "T" shaped skills was first described in 1991. "T" shaped individuals combine both a depth and breadth of skills possessing deep functional expertise with well-honed social skills to collaborate across disciplines.

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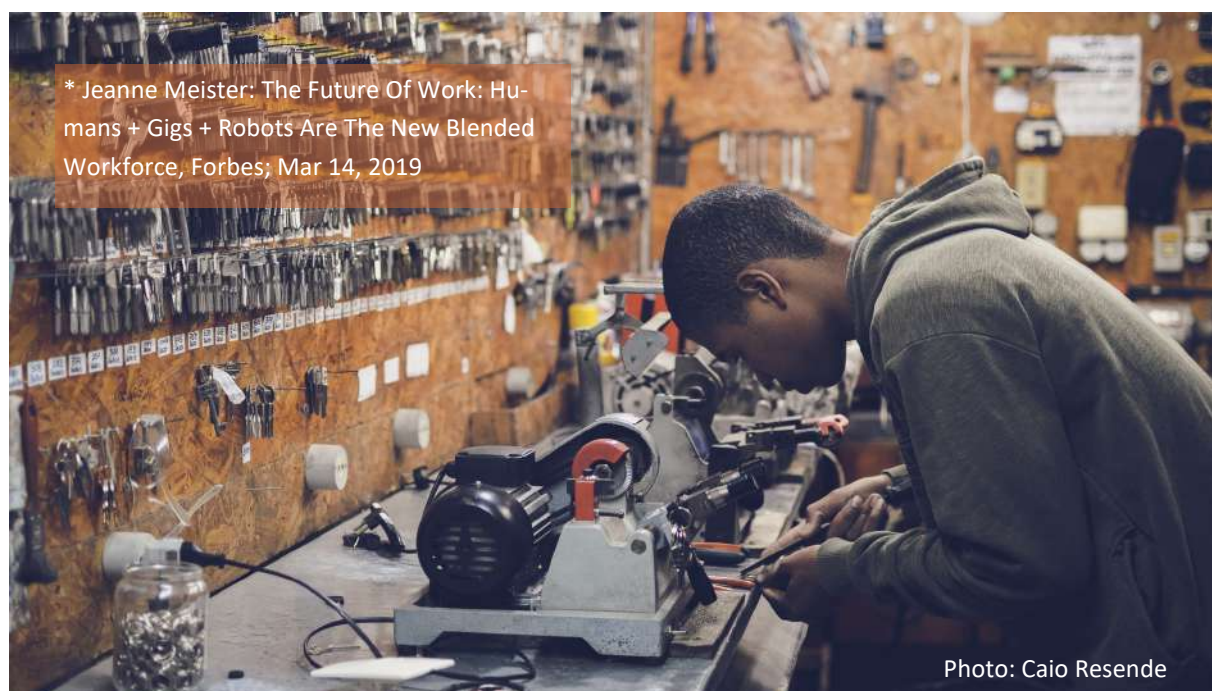


But today, the focus is moving beyond T shaped skills to the development of broader skills in what I have coined, "Z-shaped skills." Z-shaped skills combine deep business & digital literacy with soft skills of the Five C's: Collaboration, Critical Thinking, Communications, Cultural Fluency and Change Management along with a focus on Creativity and Innovation.

The forerunner of this commitment to the intersection between business, technology, and design capabilities was Steve Jobs. As Steve Jobs once said, "The Macintosh turned out so well because the people working on it were musicians, artists, poets, and historians – who also happened to be computer scientists."

Creativity and critical thinking as key human capabilities needed in the workplace of the future, one where machines will handle problem-solving while humans focus on problem finding.

This point of view is reinforced by a survey of a population of global managers and leaders. When they were asked the most important skill for leaders to succeed in a digital workplace, only 18% of respondents listed technological skills as most important. Instead, they highlighted having a transformative vision, demonstrating collaborative skills, being a forward thinker, and having a change-oriented mindset.



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## Revaluing TVET



**San Antonio Hotel + Spa,  
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IVETA Europe is pleased to hold its first regional conference on technical, vocational education and training (TVET) in beautiful Malta.

The theme of the conference is **"Revaluing TVET"**.

TVET generally has the dubious position of being the poor cousin in relation to higher education. Students and their parents look at TVET options as the last resort if a university place of their choice is not available. Governments throw money to build ever-expanding universities yet grudgingly acknowledge that TVET institutions are a necessity without the same level of commitment or investment.

The fact is that TVET skills create new businesses and generate employment. The world runs on TVET skills in virtually all industries and sectors. While some nations are starting to realise the importance of investing in and building up this area, there many others who place less importance on it in their quest to become "developed". This conference seeks to redress the imbalance in the views of TVET across the different stakeholders, including those of TVET students themselves.

Educators and industry practitioners from around the globe will come to share their expertise, ideas and experience. The conference is organised jointly by Warnborough College and St Joseph Mater Boni Consilii School, Malta.

More details and registration procedures can be found on the conference website: <http://www.warnborough.net>



# Education Policy and Development of African TVET Systems for Sustainable Industries



## 1<sup>st</sup> INTERNATIONAL CONFERENCE AND HOMECOMING

Date : 2nd - 6th July, 2019  
Venue : Princess Alexandra Auditorium, University of Nigeria, Nsukka

**FACULTY OF VOCATIONAL AND TECHNICAL EDUCATION, UNIVERSITY OF NIGERIA, NSUKKA**

IN COLLABORATION WITH  
**NKB-LUCUBRATE, NORWAY**

Training

## EDUCATION POLICY AND DEVELOPMENT OF AFRICAN TVET SYSTEMS FOR SUSTAINABLE INDUSTRIES

**T**echnical Vocational Education and Training (TVET) is central to the achievement of sustainable growth in industries because they need people with the right set of knowledge, skills and attitude to grow. Numerous TVET institutions have been established across Africa to produce graduates who are work-ready and who are capable of creating employment for themselves and for others. However, economic situations in many African countries, including unemployment challenges, suggest that the TVET institutions may not be delivering their mandates successfully; even as international and supranational organisations continue to advance policies and programmes for the improvement of TVET access, quality and relevance. TVET stakeholders need to be aware of these policies and programmes. They need to develop adequate understanding and capacity to assess, recontextualize and implement the policies and programmes successfully.

This conference will bring together TVET educators, scholars, policy makers and industrialists to X-ray existing TVET policies and make recommendations for creating/strengthening African TVET policy frameworks to make them capable of transforming and revitalizing the TVET systems to support industrial growth.

In this conference, the faculty of Vocational and Technical Education of the University of Nigeria will be welcoming back former students, members and heroes of the faculty, who have gathered a lot of TVET experience from different parts of the globe. It presents an excellent opportunity to celebrate their achievements as well as those of the faculty which has existed since 1963.

### SUB-THEMES

**T**he conference will focus on making education policies in Africa contribute to helping students develop the skills they need to work and contribute to sustainable industries. Thus, the following sub themes will be addressed.

- Education policy for developing and implementing TVET curriculum that can equip students with competencies they need to succeed in industries today and in the future
- Education policy for effective assessment, reporting and certification in TVET
- Education policy for successful digitalization of TVET processes
- Education policy for improving TVET environment
- How can education policies in Africa ensure effective continuous professional development of TVET educators?
- How can the industry collaborate with educational institutions to ensure that they get people with skills they need for sustainable growth?

### SPEAKERS



**HON. NAMSURUGA ROSEMARY SENINDE**  
Minister of State for Education and Sports, responsible for the TVET program in Uganda.



**PROFESSOR SAMSON O. OLAITAN**  
Emeritus Professor of Agricultural Education, Faculty of Vocational and Technical Education, University of Nigeria, Nsukka



**MR KARL SKAAR**  
CEO of NKB-Lucubrate and Senior Analyst, Norwegian Directorate for Education and Training.



**PROFESSOR BENJAMIN A. OGIWO**  
Chair, Dept. of Career and Technical Education, Prattville State University of New York, Oswego, New York, United States & Founding Director, Center for Technical Vocational Education, Training and Research, UNN



**PROFESSOR SHEHU ABDULLAH MEALI**  
Professor of Industrial Technical Education and Director, Future Ventures, Federal University of Technology, Minna, Niger State.



**ENGR BAYO OGUNTANADE**  
European Union Water and Sanitation Key Expert, Consummate Procurement and Development Water Resources Specialist, Multi-Disciplinary Consultant and Construction Engineer

**CHIEF HOST:** The Vice Chancellor, University Of Nigeria, Nsukka

### EVENT HIGHLIGHT

DAY	MORNING/AFTERNOON	EVENING
<b>DAY ONE</b> 2ND JULY, 2019	-	<b>Reception</b> Music, dinner, welcome address
<b>DAY TWO</b> 3RD JULY, 2019	<b>Opening Session</b> <ul style="list-style-type: none"> <li>• Speeches</li> <li>• Presentations</li> <li>• Exhibition of innovative made-in-Africa products</li> </ul>	<b>Hero Awards and Music Night</b> <ul style="list-style-type: none"> <li>• Musical performances by the Department of Music, UNN</li> <li>• Presentation of awards to distinguished alumni and heroes of the faculty</li> <li>• Presentation of awards to exhibitors of most innovative products</li> </ul>
<b>DAY THREE</b> 4TH JULY, 2019	<ul style="list-style-type: none"> <li>• Symposium - TVET Country Experiences</li> <li>• Facility Tour</li> <li>• Technical sessions</li> </ul>	<b>Drama Night</b> Performance by the Department of Theatre and Film Studies, University of Nigeria
<b>DAY FOUR</b> 5TH JULY, 2019	<ul style="list-style-type: none"> <li>• Symposium - TVET Country Experiences</li> <li>• Technical Sessions</li> </ul>	<b>Gala Night</b> Music, dance, dinner, cultural performances and more
<b>DAY FIVE</b> 6TH JULY, 2019	Departure	

### In this conference:

- Presentations will be insightful
- Activities will be fun and educative
- Outcomes will be actionable

### FEES:

International Participants:	\$200.00
Local Participants:	NT17,000.00
Graduate Students:	NT10,000.00/\$100
Local Exhibitors:	NT10,000 + Conference fee
International Exhibitors:	\$100 + Conference Fee
Student Exhibitors:	Free
Institutional Exhibitors:	NT50,000.00

To make payments, please visit [www.internationalvetpolicyconference.com](http://www.internationalvetpolicyconference.com)

The fees cover full participation in the conference activities for the four days including:

- Conference materials including book of abstract, handouts and writing materials
- Tea break and lunch buffet
- Technical sessions and Group discussions
- Opportunity to interact with made-in-Africa products and their makers
- Opportunity to network with eminent policy makers and leaders as well as world-class TVET educators, industrialists, and consultants
- Signed certificates for participants

Participants will take care of their transportation and accommodation costs.

### PUBLICATION

**P**apers presented at the conference would be peer-reviewed and if accepted, would be published based on strict quality consideration of originality, research content, applicability, relevance, coherence and balanced flow of contribution to knowledge. The peer-reviewed and reworked papers would be published in the Vocational and Technical Education Journal.

### SUBMISSIONS

**A**bstracts must not be more than 300 words. Full papers must not exceed 15 A4 pages including works cited/references. Referencing style must adhere to current APA standard. Font size should be 12 and in Times New Roman. Deadline for submission of abstracts is 25<sup>th</sup> May, 2019. As soon as your abstract is accepted for presentation at the conference, you will be notified. For submissions, please visit [www.internationalvetpolicyconference.com](http://www.internationalvetpolicyconference.com).

### We look forward to welcoming you!

The university town of Nsukka is located in the semi savannah, semi-forest planes of the south-eastern region. The town is unique in many ways. It has captivating hills, rich natural and cultural features and friendly weather with temperature that revolves between 26 – 28 Degrees Celsius. The Nsukka people are warm, friendly and very receptive to visitors. Indeed, the town is a home away from home to numerous sojourners and visitors and has comfortable guest houses and hotels. They are as follows:

**UNIVERSITY OF NIGERIA GUEST HOUSE**  
Inside the Campus  
**N7000 – 35,000**

**PRESIDENTIAL LODGE**  
Inside the Campus  
**N20,000 – 35,000**

**JERRY MARRIOT HOTEL**  
Ugwu Awara, Off Campus  
**N7000 – 30,000**

**GOLDEN VALLEY HOTELS AND SUITES**  
1, Golden Valley Avenue  
**N10,000 – 50,000**

**OLD CAROLINA GUEST HOUSE**  
(Close to Campus)  
Obollo Road  
**N5,000 – N7,000**

**KENNAN LODGE**  
3, Alor Uno Road, Off Campus  
**N10,000 – 65,000**

**GRACE MANOR HOTEL**  
GRA, Nsukka  
**N8,000 – N15,000**

### REGISTER NOW!

For more information and update on the conference, visit the conference website:

[www.internationalvetpolicyconference.com](http://www.internationalvetpolicyconference.com)

Call the secretariat on +234 7066980933, +234 69277146, WhatsApp +234 8034391972

or email [ashagwu.okadi@unn.edu.ng](mailto:ashagwu.okadi@unn.edu.ng) or [catherine.kanu@unn.edu.ng](mailto:catherine.kanu@unn.edu.ng)

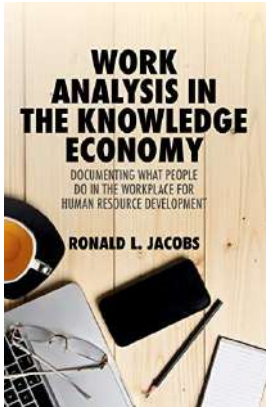




Book

## Work Analysis in the Knowledge Economy

By Ronald L. Jacobs



### Work Analysis in the Knowledge Economy: Documenting What People Do in the Workplace for Human Resource Development

Work analysis seeks to breakdown the work behaviors that people do and the characteristics of people who successfully perform the work, and then to reassemble the information in a form that has many uses in practice. The information can be used to specify job expectations, establish quality standards, develop training programs, document work processes, and anticipate safety risks, among many other uses. This book is a practical guide to using the work analysis process for improving performance in the workplace, particularly with the emergence of knowledge work. Work has undergone much change, and the trend is towards increased complexity, demanding employees to use their cognitive abilities to a greater extent. Work analysis has often been criticized for its historical focus on documenting simple, observable, and routine behaviors performed by individuals involved in low-skilled production work. But it doesn't have to be so, as readers will discover. Indeed, the demands of organizations and societies in the digital age has placed greater emphasis on documenting the changing nature of work.

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# **Lucubrate**

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## **Change in Jobs and Tasks**