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BACKGROUND

Today's shift from simple assembly and processing to technology-intensive industries calls for skilled persons capable of exploiting state-of-the-art technologies as well as developing new applications, processes and products.

However, it is entrepreneurship that is the catalyst for putting innovation into action. Pro-activity, creativity, innovation, risk taking, awareness and need for achievement are outstanding features and, at once, the essence of what differentiates entrepreneurial from non-entrepreneurial individuals. Entrepreneurial skills have become a crucial asset for employability as well as productivity and competitiveness.

If history shows that countries cannot have sustained economic development without a burst of entrepreneurial energy, empirical evidence indicates that investing relatively more in early years in education and training is more cost-effective than later interventions. Therefore, investing in young people with technical skills and an entrepreneurial mind-set is fundamental if countries do not want to be left short of persons eager and able to take initiative and actively contribute to the development of their countries in the future.

How can countries through their education systems and the private sector most effectively promote entrepreneurial attitudes and talent in youth? In order to address this question, the United Nations Industrial Development Organization (UNIDO), with support from the Government of Japan, convened a conference on "Fostering Entrepreneurial Youth" at its headquarters in Vienna during 11–13 November 2014.

The purpose of the conference was to discuss approaches to developing young people's attitudes, skills and knowledge concerning an entrepreneurial society. In identifying tools, methodologies and strategies, the results of the conference were intended to assist governments to develop and improve entrepreneurship curricula and learning initiatives.

The conference featured a keynote address on why, how and for which results countries should foster their entrepreneurial youth; and five sessions on countries' experiences in delivering

entrepreneurship curricula in secondary education, involvement of the private sector, appropriate pedagogical approaches, assessment of curriculum performance and factors to promote entrepreneurial societies; and a concluding session. More than a hundred researchers, practitioners, educational officers, experts from governments and international organizations and representatives from the private sector and civil society reflected on the following main questions:

- How can entrepreneurial activities contribute to a country's economic transformation?
- What are the ways to equip teachers with skills that foster youth entrepreneurship?
- How to assess the effectiveness of a country's entrepreneurship curriculum programme vis-à-vis its development objectives?
- How can the private sector contribute to improving the quality of Entrepreneurship Education and training?

Each substantive session consisted of a series of short presentations followed by an interactive discussion led by a moderator.

This report summarizes the main points from each session and highlights crosscutting themes and recommendations from the whole conference.

OPENING



The official opening of the conference was held in the Conference Room 1 of the Vienna International Centre. This included speeches by **Mr Taizo Nishikawa, Deputy to the Director General of UNIDO; His Excellency Mitsuru Kitano, Ambassador Extraordinary and Plenipotentiary of Japan to the International Organizations in Vienna; and Mr Mohamed-Lamine Dhaoui, on behalf of Mr Philippe Scholtès, Managing Director of the Programme Development and Technical Cooperation Division of UNIDO.**

Mr Nishikawa welcomed participants to the international conference and conveyed the Director General of UNIDO, Mr Li Yong's best wishes for a successful conference. Mr Nishikawa stated that entrepreneurship was the foundation of a sustainable and dynamic private sector and that a thriving private sector was a precondition for economic growth in any market economy. He emphasized though that in many developing countries, the majority of people lived in an agrarian, often subsistence economy. Many young people grew up without opportunities to learn entrepreneurial and industrial attitudes and skills. As a result, young people were often unable to find productive work or start their own business. This led to poverty with persistent unemployment and underemployment. He added that globally, some

200 million people were currently unemployed, many of them young people. By 2020, some 600 million jobs would need to be created to absorb the growing young population. Mr Nishikawa asked the audience, "Why does entrepreneurship matter for inclusive and sustainable industrial development?"



Taizo Nishikawa

He answered that entrepreneurship was an inclusive process that enabled the bottom billion, women and men, in rural as well as urban areas, to climb up the wealth ladder. Entrepreneurship also transformed economies and enhanced industrial development, inclusively and sustainably, from individual and grass-root levels. Mr Nishikawa expressed gratitude to the Government of Japan for their support that allowed the event and also thanked the distinguished speakers and panellists for bringing their expertise to the conference.

His Excellency Mr Kitano first thanked UNIDO for organising the conference. He recognized the importance and benefits of Entrepreneurship Education and stated that fostering entrepreneurship was conducive for human resource development. This energized societies, job creation and economic development. This was not only the case in developing countries but also applied to developed countries. According to Mr Kitano, actively promoting entrepreneurship had long been an important issue in Japan. Entrepreneurial education was introduced to Japanese school curricula in order to stimulate youth in the pursuit of careers and also for their future activities. The growth strategy of the current administration aimed to strengthen earning power as well as human resources to ensure enhanced productivity and production. According to Mr Kitano, Japan believed firmly that investing in youth by providing entrepreneurial, technical and vocational education was an essential tool in ensuring inclusive and sustainable development around the world. Lastly, he stated that Japan reaffirmed its support towards the achievement of global inclusive and sustainable industrial development through entrepreneurial, technical and vocational education.

Mr Dhaoui warmly welcomed the participants to the conference on behalf of Mr Philippe Scholtès, the Managing Director of the Programme Development and Technical Cooperation Division of UNIDO. He indicated that the conference presented an opportunity to address an essential element in inclusive and sustainable industrial development, that is, to foster a generation of skilled entrepreneurs for economic transformation. History showed that countries cannot have sustainable development without a burst of entrepreneurial energy. He underlined that academic and technical skills remained key for structural change and technological upgrading, but that the current shift from simple assembly and processing to technology-intensive industries called for persons capable of exploiting state-of-the-art technologies as well as putting

innovation into action. Pro-activeness, creativity, innovation, risk taking, awareness and need for achievement were outstanding features and the essence of what differentiates entrepreneurial from non-entrepreneurial individuals. Skills were formed throughout an individual's life in response to home, neighbour and school environments. The early stages of development were fundamental in this respect. Empirical evidence indicated that investing relatively more in early years to improve both cognitive as well as socio-emotional skills was more cost-effective than later intervention. Mr Dhaoui argued that investing in young people with cognitive and soft skills and with an entrepreneurial mind-set was fundamental if countries did not want to be left short of persons eager and able to take initiative and actively contribute to the development of their countries in the future. He mentioned how UNIDO had been helping governments in their efforts to create jobs and integrate marginalized youth into the economy. Initiatives ranged from reinforcing local support structures to enhance platforms for information sharing, to assisting young entrepreneurs create and develop their businesses through value chains, enhancing technical and vocational skills in young people for manufacturing and related services, and working with schools and universities to implement entrepreneurship and youth curricula programmes.



Mitsuru Kitano

KEYNOTE SPEECH

The keynote speaker was **Professor Alain Fayolle, Professor of EM Lyon Business School, France**. His research interests covered a range of topics in the field of entrepreneurship such as education and training, corporate entrepreneurship, new venture process, family entrepreneurship, opportunity and necessity entrepreneurship, with Entrepreneurship Education in the forefront. More recently, his research focused on the dynamics of entrepreneurial processes, the influences of cultural factors on organizations, entrepreneurial orientation and evaluation of Entrepreneurship Education. He had published 20 books and over 100 articles in leading French-speaking and scientific journals. As a specialist in entrepreneurship, the keynote speaker was tapped by the Organisation for Economic Cooperation and Development (OECD) and the European Commission to evaluate entrepreneurship strategies in different European countries.

Introduction

Professor Fayolle began by stating his interest in the topics of the conference – especially on developing entrepreneurial mind-sets, skills and competencies; partnerships with the private sector;



Alain Fayolle

and assessing learning outcomes. He mentioned that OECD, the European Union and the World Bank had been publishing reports, suggesting that entrepreneurship was a hot topic. He emphasized that while we acknowledge the great importance of entrepreneurship and try to define concepts and notions, it is very difficult to know how we can develop attitudes, knowledge, competencies and appropriate mind-sets in entrepreneurship.

Fostering Entrepreneurial Youth

Why?

Professor Fayolle stated that there was a need to foster entrepreneurial youth because of the changing world, global pressures, and greater uncertainty and complexity. There was a need for an entrepreneurial response.

He talked about how many young people experienced unemployment and underemployment in developing and even developed countries. Employment ability strongly depended on the entrepreneurial mind-sets and capabilities of people. Entrepreneurs created businesses and jobs and contributed to the economic (and social) development of their countries. Professor Fayolle was reminded of a strong statement of David McClelland about the entrepreneur being a key actor in economic development who turns an individual need for achievement into economic growth. Herewith, McClelland linked individual micro labour to macro labour and saw entrepreneurs as the main contributors to social and economic development. Entrepreneurship was a powerful way of including disadvantaged people and young people.

Professor Fayolle shared the definition of an entrepreneur which one of his students gave: “An entrepreneur is an individual acting with patience, is freedom loving. He builds up a jail without bars.” He explained that the definition showed entrepreneurs are not much more independent than top managers or executives, but they are probably more free in the sense of having the opportunity to build their organization depending on their aspirations, values and thoughts.

How?

Professor Fayolle explained that he would be patterning his discussion using a framework proposed by William B. Gartner, which looked at entrepreneurship using four key dimensions:

The Individual

In the first dimension presented by Professor Fayolle, individual awareness of entrepreneurship should be developed as soon as possible, and through this the roles and contributions of entrepreneurs to society must be underlined. Developing peoples' entrepreneurial mind-set involved fostering self-confidence, risk or failure acceptance, leadership, creativity, positive motivation, resilience and self-efficiency. Entrepreneurial capabilities are related to three dimensions: skills, competencies and knowledge.

One example of an entrepreneurial skill was opportunity seeking and grasping, which also involved other skills as pointed out by Allan Gibb. These were taking initiatives to make things happen, solving problems creatively, managing autonomously, taking responsibility for and ownership of things, networking, putting things together creatively and using judgement to take calculated risks. These skills could be developed in different contexts, not just in school and universities, but also through family role models and in entrepreneurial regions or countries.

Education played a key role in developing awareness and having the entrepreneurial mind-set even as early as primary school then secondary school. Implementing an entrepreneurial pedagogy was based on four pillars: (a) giving youth autonomy in learning to allow them to develop a sense of responsibility in their own learning process, (b) experiential learning, (c) cooperative learning and (d) reflexive learning.

The Environment

Professor Fayolle stated that changes in the environment were needed in relation to our formal and informal institutions. Informal institutions referred to culture, which was very important for developing interest in entrepreneurship and entrepreneurial intentions, because it related to the desirability in becoming an entrepreneur and acting as one. Meanwhile, he referred to regulations when he talked about formal institutions. They affected the perception of the feasibility of entrepreneurship, because they could reduce the

costs of entrepreneurship, increase the existence of opportunities and facilitate access to human and social capital. Both formal and informal institutions required change to ease and facilitate the entrepreneurial process.

The Organization

Professor Fayolle stated that this dimension not only encouraged people to create their own jobs or their own company, but also encouraged them to grow their existing companies and achieve much more ambitious objectives. There was a need to facilitate access for young companies to key resources like finance, work technologies and partners, and markets. Stimulating development of entrepreneurs' or enterprise networks was another dimension in entrepreneurship that was needed and related to the organizational dimension.

The Process

Professor Fayolle recognized that time is money, but money depends on time – time needed to get financial resources, time needed to get market access and time needed to turn opportunities into revenue, and time needed to grasp opportunities and become an expert entrepreneur.

For Which Results?

According to Professor Fayolle, fostering entrepreneurial youth through education and institutional changes leads to the development of entrepreneurship-related human capital in terms of attitudes towards entrepreneurship, beliefs and mainly desirability, perceived personal benefits, entrepreneurial knowledge and entrepreneurial competences and skills. More studies needed to address other research questions regarding the outcome of entrepreneurial programmes.

Conclusion

Professor Fayolle concluded that fostering entrepreneurial youth meant changing educational systems, not only by introducing entrepreneurship courses but also by changing institutions through public policies. Cultural changes were needed, but this could be seen as a consequence of institutional changes. He was hopeful that the initiatives formed in the conference would lead the participants to develop a new generation of young entrepreneurs not only focused on new economic value creation, but also on new ways of contributing to more social justice.

SESSION I: INVESTING IN FUTURE ENTREPRENEURS



Summary of the Presentations

The first session on investing in future entrepreneurs showcased selected experiences of several countries that have adopted a national policy introducing entrepreneurship curricula in general secondary, technical and vocational education. The relevance of experiences in the development context was also presented. The session was moderated by **Her Excellency Bente Angell-Hansen, Ambassador of the Permanent Mission of Norway to UNIDO.**

Ms Angell-Hansen warmly welcomed the participants to the first session of the conference. She highlighted the problem of youth unemployment, a challenge that could be met by investing in future entrepreneurs. All countries needed innovations, change and entrepreneurship. In this session, she gave examples from projects that had the goal of fostering young entrepreneurship – projects that gave young people a head start. African countries had spearheaded the introduction of entrepreneurship curricula in their secondary school systems on a nationwide basis. European countries were revitalizing this important agenda to foster growth and employment; and so were countries in Asia and Latin America. Ms Angell-Hansen underlined the importance of harnessing the

economic potential of women, as in many countries there were impediments to women realizing their potential as entrepreneurs. If this gender gap were closed, countries could increase their GDP by more than 30%. She asked if any country could afford not to charge ahead. She then called on **Ms Gabriele Ott, Industrial Development Officer at UNIDO** for an introduction and a short film presentation.

Ms Ott introduced the UNIDO Entrepreneurship Curriculum Programme (ECP), which supported the goal of poverty reduction through productive activities. The vision, she said, was to promote entrepreneurial upward ability to as many people as possible for them to move out of poverty. The strategy was to have an environment that let these entrepreneurial initiatives flourish and developed human resources.

The people who could make these changes were those that could transform agrarian societies, Ms Ott affirmed. For example, by adding value to resources or by bringing new ideas and solutions to rural areas: those who could tackle the challenge of unemployment, particularly for youth, by creating jobs for themselves and others; those who could develop a competitive and dynamic private sector by being innovative and creative; and those who could create growth and wealth by their investment



Bente Angell-Hansen

decisions. With this perspective, the ECP was trying to give a response by developing entrepreneurship competencies among youth. This was not only about start-ups but included much wider concepts about entrepreneurial competencies (attitudes, skills and knowledge) that would help people to be more entrepreneurial.

Ms Ott explained that the nationwide programme addressed both rural and urban areas and girls, boys, women and men. It targeted the future and laid the foundation by working with youth for future generations of entrepreneurs.

Ms Ott described three pillars of the ECP to introduce entrepreneurship into secondary education. The first pillar was entrepreneurial characteristics. The second was the discovery process – the identifying and selection of opportunities. The third was to steer and manage a business for growth.

For each country, first, an individual strategy for the ECP needed to be developed, and it had to suit the context and respond to particular challenges. Other key steps of preparing for an ECP were establishing partnerships, developing the curriculum as well as capacity building programmes for teachers, education officials and the private sector. A pilot experience had to be considered in preparations for rollout on a national level.

Ms Ott underscored the need to share lessons learned through international exchanges between countries. She said that Uganda has been a pioneer in introducing the entrepreneurship curriculum in Africa, with more than 1.4 million students and 2,400 schools studying and practising entrepreneurship. UNIDO organized two seminars in Uganda, one in 2003 and the other in 2005, to share experiences with other countries. There had also been study visits to Namibia and Mozambique; an expert group meeting in Vienna in 2007; a Maputo stakeholder conference in 2013; and in Dublin, UNIDO was able to present the experiences of Angola and Mozambique at the World Conference of Entrepreneurship in 2014. The present conference, “Fostering Entrepreneurial Youth”, also counted as a unique opportunity.

After her introduction a short video was played showcasing UNIDO’s decade of experience with ECP in 11 countries, mainly in Africa. The film focused on UNIDO’s approach to entrepreneurship curriculum development and its impact on the personal lives of students and graduates enrolled in entrepreneurship

classes in primary, secondary, technical and vocational schools and universities. By portraying three specific countries – Namibia, Mozambique and Rwanda – that had successfully implemented ECP, the documentary showed how ECP boosted entrepreneurial initiatives and undertakings, which had an impact on the greater society.

Following the video the moderator gave the floor to **Her Excellency Fernanda Maria Brito Leitão Marques, Minister of Education and Sports, Cabo Verde**. Ms Marques introduced Cabo Verde as a very small archipelago country off the coast of West Africa with half a million inhabitants. She indicated that they had a vision for 2030: to transform Cabo Verde into a platform for high value added services, and a diversified economy with competitive and sustainable clusters including tourism, agribusiness, sea and air, financial services, information and communications technology (ICT) and a strong emphasis on a creative economy and the sports industry. To achieve this, Ms Marques introduced what she called the magic triangle, which was reflected in Cabo Verde’s Integrated Policy of Education, Vocational Training and Employment that has a vision based on human resources. It aimed to empower people – making them competitive, innovative and creative, fostering entrepreneurship and promoting gender equality.

The Integrated Policy had four main axes, as outlined by Ms Marques. The first was employment and inclusion, which increases employment opportunities to reduce regional disparities and gender. The second was the promotion of lifelong learning and qualification, which leads to improving



Fernanda Maria Brito Leitão Marques

the skill of the population, promoting access and opportunities for technical education. The third was promoting entrepreneurship for social and enterprise development. Lastly, promoting the quality of systems, especially education and training quality would provide citizens with the skills necessary to ensure full integration into society.

Within this framework, Ms Marques indicated that Cabo Verde introduced the ECP in 2014 and would carry it through until 2016. This pilot project was launched in 12 schools across six islands. Entrepreneurship was introduced as a subject in the first and second cycle of secondary general and technical education, in Grades 9–12.

Ms Marques stated that the programme's objectives are to instil positive attitudes towards entrepreneurship, develop entrepreneurial skills, support students in their learning process by providing them with opportunities for practical experience, and strengthen self-esteem, responsibility, creativity and planning in whatever they do.

The benefits of the programme included having new approaches to teaching and learning and practical approaches and links to other subjects. Additionally, the programme fostered creative thinking and focused on solutions. The programme allowed students to learn by trial and error, reinforcing their self-confidence. Teachers and students became change agents. Through the programme, partnerships were formed with the involvement of the private sector.

To end her discussion, Ms Marques reported the status of the programme. Entrepreneurship teaching started in September 2014, for Grades 9 and 12. The programme covered 12 schools, across six islands with 2,493 students enrolled and 54% of them female. Ninety-one teachers were trained to teach entrepreneurship, 48% of them female. In addition, 29 technicians were trained, including school directors, pedagogical inspectors and central Ministry staff. Students' assessment and evaluation started in October 2014 and data processing was ongoing.

Ms Angell-Hansen introduced the five countries that had introduced an entrepreneurial curriculum programme as a nationwide programme and their representatives. First introduced was **Ms Constance Mbabazi Kateeba, Director of the National Curriculum Development Centre in Uganda**. Uganda had been spearheading this programme since 2002.

It had been an ambassador of this programme by providing two seminars for other countries. Second introduced was **Mr Ivaldo Quincardete, the National Director of Secondary Education at the Ministry of Education in Mozambique**. Mozambique had introduced the ECP with the support of Norway, first as a pilot experience in a Northern Province, then as a nationwide project from 2007 to 2013. Third introduced was **Mr Patrick Simalumba, Deputy Director of the National Institute for Educational Development in Namibia**. Besides private sector contributions and the budget from the education basket, Norway had supported the Institute through a Namibian–Norwegian association, while the Republic of Korea had supported UNIDO technical assistance and Germany had stepped in with support for training workshops. Ms Angell-Hansen indicated that Ms Joyce Musabe, Deputy Director General of the Rwanda Education Board could not join the conference, but **Mr Senseri Mtatiro, National Consultant on Entrepreneurship Education, UNIDO** was requested to share the Rwandan experience with the audience on her behalf. Lastly, Ms Angell-Hansen introduced **Mr Diasala Jacinto André, National Programme Coordinator of the National Institute for Research and Development of Education in Angola**. Angola had undertaken a solid piloting approach in 45 schools with the support of UNIDO for the technical assistance which was funded by the Republic of Korea, Portugal and Chevron as well as the United Nations Development Programme. Written forms of each country's presentation were provided to participants. The representatives shared their experiences by answering four questions.

The first question: What strategic reasons were behind the decision to embark on an entrepreneurship curriculum programme?

Ms Mbabazi indicated that the high unemployment among Uganda's youth was the main reason to trigger the idea to introduce entrepreneurship in general education and vocational training, with a view to try and provide a way out for students who leave schools and join the labour market with skills to start their own employment and employ those with no jobs.

Mr André stated that the aim of the reconstruction effort in Angola was to diversify the economy. The education system was reformed in 2004, targeted at the reduction of dropout rates. The Constitution set development and promotion of entrepreneurship as a key task.

Mr Quincardete declared that Mozambique had a national agenda targeted at development of human resources and poverty alleviation. Education was encyclopaedic, but not adequate for the labour market.

Mr Simalumba stated that the high unemployment rate of 37.6% in 2008, 41% among youth, and high dropout rates were reasons for Namibia to introduce Entrepreneurship Education. In addition, Namibia had a vision for 2030 to become an industrial society with citizens that were job creators instead of job seekers, and citizens who think innovatively.

Mr Mtatiro stated that Rwanda had a vision for 2020 – to transform to a middle-income society and an industrialized nation. High unemployment rates and poverty were problems. The country had few natural resources, so they focused on the export of human resources whereby entrepreneurship training develops them to become resourceful.

The second question: What strategic choices were taken for the introduction of the entrepreneurship curriculum?

Ms Mbabazi explained that in Uganda, most students left school at Senior 4 and did not continue with post-secondary education, instead starting employment. So Entrepreneurship Education was introduced in Senior 1 and then to Senior 5 and 6. Later on, entrepreneurship was introduced to students in technical and commercial institutions as well as farm schools. So far, entrepreneurship classes were compulsory in technical and commercial institutions, but optional for Senior 1–6. Uganda hoped to make this compulsory for every learner.

Mr André informed that entrepreneurship was made a compulsory subject in general secondary schools, vocational training and teacher training in Angola. Other subjects had to be reduced in the first cycle in order for the entrepreneurship subject to be introduced. In the second cycle, entrepreneurship was introduced while maintaining traditional subjects. There is a strong focus on practical learning. After the pilot project in nine provinces, entrepreneurship was introduced all over the country.

In Mozambique, as Mr Quincardete discussed, the first cycle had entrepreneurship as a compulsory subject with two lessons a week. In the second cycle, it was optional with two hours a week. Many students participated even if they were not obliged to. Teachers were given in-service training, and he

elaborated on the evaluation and monitoring system. The university programme for teachers prepared them to teach entrepreneurship as a course.

In Namibia, as discussed by Mr Simalumba, Entrepreneurship Education was introduced across the educational system, first in the upper primary of Grades 5–7 and further in pre-vocational subjects such as elementary agriculture, design, technology and home ecology. The purpose was to create awareness of entrepreneurial skills and lay the foundation for the higher grades. In the junior secondary, Grades 8–10, the business management subject was replaced with entrepreneurship. It was an optional course but very popular, with 80% of students taking entrepreneurship. In senior secondary, the piloting phase was taking place. The syllabus for Grades 11 and 12 was accredited at the University of Cambridge, a co-partner in senior secondary education. Entrepreneurship was also introduced as a unit in the vocational training centres.

Mr Mtatiro reported that In Rwanda's lower level secondary schools, Introduction to Economics was replaced with Entrepreneurship Education. One year later it was also introduced in the upper secondary level with 5 hours per week. Currently, entrepreneurship is compulsory for all secondary school levels. The Rwandan Development Board was set up to oversee all entrepreneurship training in the country in both formal and informal education, so even the local population was receiving Entrepreneurship Education.

The third and the fourth questions: What is the current status of the ECP in your country and what are the perspectives? Some of this has already been touched on – i.e. status. How is Entrepreneurship Education really energized towards the behaviour – what have you observed regarding the behaviour in students, graduates, teachers, families, schools or communities?

Ms Mbabazi indicated that Entrepreneurship Education was one of the optional subjects currently studied at the 'O' and 'A' levels in Uganda. Entrepreneurship is offered in the National Diploma Programmes in Uganda Technical Colleges, Uganda Colleges of Commerce and Technical and Farm Vocational Schools. Entrepreneurship Education was a crosscutting unit in almost all university courses, and was also studied in all Technical and Vocational Education and Training Institutions in Uganda as a core course unit. Teacher Training Institutions had pre-service teacher training

programmes for Entrepreneurship as a teaching subject. There were notable changes in eagerness in students' projects. They were more motivated to finish their assignments. Schools were more supportive towards their students, even financially; more practical teaching methods were used, and the perception that practical training is expensive had diminished. Parents were very supportive; they bought the products that the students produced, and even provided raw materials.

Mr André mapped out the specific provinces of Angola that had piloted entrepreneurship in secondary schools from 2010 to 2013: Cabinda, Uíge, Malanje, Lunda-Norte, Luanda, Huambo, Benguela and Huíla e Cunene. As of 2014, gradual rollout to the remaining nine provinces was ongoing, covering Zaire, Bengo, Kwanza-Norte, Lunda-Sul, Moxico, Cuando-Cubango, Bié and Kwanza-Sul e Namibe. There had been enhanced entrepreneurial intention of students and teachers, application of students' skills in community and professional contexts, and enhanced awareness and knowledge about entrepreneurship in students' families. Involvement of families in the school life of their children had increased, improving intra-family relationships including emotional relationships. This contributed to the improvement of family business and incomes. There was no negative impact on student outcomes in other disciplines. The programme contributed to improved performance and results in other curriculum subjects.

Mr Quincardete stated that in Mozambique, 331 schools had promoted entrepreneurship, which was 51% of all schools nationwide. Thirteen were technical vocational schools. There were 498,400 students, 49% of them girls, and there were 127,799 graduates. There were 1,654 teachers trained, 342 of them female, and 88 technicians in the Ministry of Education were also trained for the implementation of the ECP. Since 2013, the Government had continued budgeting for ECP and incorporating it into schools each year. The entrepreneurship course was incorporated in initial teacher training for secondary education. It was observed that students had new attitudes to studies and in performing other activities. Mr Quincardete stated that the role of women is very important in homes. Barriers had been removed to explore new talents – especially among girls. There was easier access to university due to better financial situations, paving the way also for the start-up of small projects. There was also student interaction with the private sector. Graduates

were better equipped to take decisions and were better integrated in the labour market. The private sector was involved in teaching; thus, there was better integration in the economic life of the school community such as visits to companies, banks and public services. Teachers were better prepared to apply entrepreneurial pedagogical methodologies. In the family, new attitudes and talents were discovered. Support was provided for youth activities. Youth could create value for the communities, with more creative solutions in rural areas making private sector satisfaction increase. Mr Quincardete emphasized that educators had to promote entrepreneurship and carry on with the initiative for the following topics: agriculture, the informal sector and the extractive industries.

In Namibia, Mr Simalumba reported, 624 out of 633 junior secondary schools offered entrepreneurship as a subject in 2013. There were 31,517 learners studying entrepreneurship in Grade 10, and 1,060 teachers were teaching entrepreneurship in junior secondary schools. Piloting in Grades 11 and 12 in secondary schools started in 2014 with four schools, five teachers and about 135 learning participants. Vocational training schools were offering entrepreneurship to their Level 1–4 students. It was observed that teachers had dropped the teacher-centred teaching approach and adopted the learner-centred teaching approach. Mr Simalumba emphasized that there should be continued training also for the government-employed advisory teachers on a regional basis. Students had become more confident and were clearer on what they would do when they left school. Several school leavers had also started their own micro and small businesses. Communities have become more positive about entrepreneurship as a career. Community members were now keen to share their entrepreneurial experiences with or teach learners as well as participate in their entrepreneurial activities. They motivated learners that change is possible, according to Mr Simalumba. The private sector was generally becoming more receptive towards the implementation of entrepreneurship. They were now more active as resource persons for teaching and participating in students' entrepreneurship activities.

In Rwanda, reported Mr Mtatiro, there were 3,000 teachers teaching entrepreneurship in 3,000 public and private secondary schools and 550,000 secondary school students learning entrepreneurship. Entrepreneurship was a compulsory subject in both Ordinary and Advanced Levels of education. Because of this, heads of schools and the community were inspired. Students

had become more hard-working. The law that required people to be aged 18 before opening a savings account had been dropped to promote a saving culture.

Ms Marques gave her comments on the four questions and summarized the discussion. She highlighted that the focus to promote was to have an entrepreneurship attitude. The aim was to see how we could transform this idea of promoting entrepreneurship, trying to give our education system a sustainable dimension. As a whole, the status of the countries involved had changed. She stated that they could not use old solutions to tackle new problems and that they needed a cross-country approach. There were opportunities arising for not only African countries but all represented countries.

In Cabo Verde, Ms Marques stated that they wanted to influence the policies fostered by their government. They wanted to have an integrated approach not only in their nation and society, but also at the levels of partners in development. Ms Marques declared that Cabo Verde was reaching and going beyond these development goals.

In the latter half of the session, Ms Angell-Hansen introduced **Mr Simone Baldassarri, Policy Officer of the Directorate General for Enterprise and Industry of the European Commission** to speak about entrepreneurship in Europe.

Mr Baldassarri stated that Europe was only slowly recovering from the economic crisis and that there was high unemployment among youth. Entrepreneurship was one of the solutions, he said, but only a minority of people wanted to be entrepreneurs in Europe. According to Mr Baldassarri, this showed that Europe had a cultural problem.

Europe's Entrepreneurship 2020 Action Plan was divided into three pillars. The first was entrepreneurial education and training to create new generations of entrepreneurs. The second was creating an environment where entrepreneurs can flourish and grow. The third was about role models and reaching to create a radical cultural change. It hoped to showcase entrepreneurship as "the new cool" and involve underrepresented groups, such as women.

Due to the complex governance structure, the action plan had to be implemented on all levels. Some parts were implemented by the EU and some by national governments.

Mr Baldassarri talked about how entrepreneurship was recognized as a key competence for life in 2006 and was defined as turning ideas into action. Entrepreneurship was a broad competence based on behaviours, mind-sets and skills, for everyone, not just entrepreneurs.

Impact studies showed that students had higher rates of pro-activity, innovation, achievement and motivation. Participants had better chances for employment and employment seemed to be steadier. They created ventures at higher rates contributing to less unemployment. According to Mr Baldassarri, Entrepreneurship Education delivered a 4:1 annual return on "societal prosperity" per dollar invested (research from Junior Achievement Canada, methodology subject to discussion).

Strategies to develop Entrepreneurship Education started with bringing all relevant ministries together. Business organizations and civil society at large had to be engaged. Next was to make entrepreneurship an integral part of studies as early as primary education. Then, teachers had to be trained and learning outcomes had to be defined. A coherent progression from primary to higher education also had to be created.

Mr Baldassarri also tackled the approaches Europe took. One was to have entrepreneurship as a method, specifically a didactic method rather than a discipline, which Professor Fayolle called entrepreneurial pedagogies. It could be implemented across all disciplines. The other method was to have training that was more specific on how to become self-employed – being and acting more entrepreneurial. Both approaches should be combined, especially for secondary and higher education. His examples of this were Denmark and the Netherlands.

In the Netherlands, Mr Baldassarri stated, entrepreneurship was viewed as a transversal activity in different subjects. This was an application of the first approach. There were subsidized school projects and networks of cooperation. There was an increased number of schools promoting entrepreneurship. He also recognized the very good approach to vocational training of the Basque Country in Spain. Under this, students started a mini-company during the school programme. Afterwards students were accompanied and receive support for a real start-up. In Wales, their strategy was to engage entrepreneurs as role models. A network of 100 entrepreneurs visited schools on a regular

basis. They also empowered students by integrating entrepreneurship into the curriculum and equipped them by supporting the development of business ideas and graduation start-ups.

EU legislation did not allow imposing curriculum on member states, Mr Baldassarri explained; therefore, it was recommended to governments. Support in terms of funding was also provided and guidelines published. This was important because students should gain practical experience before graduating from secondary schools.

European countries were encouraged to exchange their experiences. Mr Baldassarri announced that they would soon be launching a pilot project for establishment of a European network on entrepreneurial learning to support countries in policy development.

An ongoing project mentioned by Mr Baldassarri was the development of a virtual guide with teaching materials and good practices. He also named the Assessment Tools and Indicators for Entrepreneurship Education (ASTE), which would be able to assess the performance and entrepreneurial skill acquired by students. Another project was an online tool for universities to measure how entrepreneurial they are, HEInnovate (www.heinnovate.eu), developed by the European Commission and the OECD. He promised that these would be further explained in Session IV.

To share experiences in entrepreneurship in Japan, Ms Angell-Hansen warmly welcomed **Ms Hiroko Ueno, Senior Policy Analyst of the Policy Research and Consulting Division of Mitsubishi UFJ Research and Consulting Co, Japan.**

Ms Ueno first talked about the situation of Entrepreneurship Education in elementary and secondary schools in Japan. One characteristic was that there had never been an official school subject of Entrepreneurship Education. However, the Japanese Ministry of Education had promoted “career education”, aimed towards children cultivating the ability to pro-actively select and decide a clear path, while the practical side was usually experienced in the workplace.

Instead, Entrepreneurship Education in Japan was initiated by the Ministry of Economy, Trade and Industry in 1999. At that time there were already some private educational firms and non-profit organizations practising outside of school, influenced by Entrepreneurship Education in Finland, Scotland

and the USA. The Ministry of Economy used the time for comprehensive studies and mobilized the private education sector to participate in teaching in schools. There was still no official Entrepreneurship Education in schools at the time of the conference, but the Government was considering a “Restart” in April 2015.

Ms Ueno discussed how the Ministry of Economy had entrusted a think-tank to do a benchmark study on schools and teachers practising Entrepreneurship Education in Japan, private educational firms and non-profit organizations in Japan practising Entrepreneurship Education outside of school, and Entrepreneurship Education overseas. They were also entrusted to develop a model entrepreneurship curriculum that teachers could modify freely, consisting of several sessions that teachers could select according to their amount of allowed time. This was because Entrepreneurship Education was not an official subject. Teachers had to utilize hours for comprehensive studies and other subjects. The think-tank was also asked to develop a guide to introduce and implement Entrepreneurship Education. They furthermore provided an information platform where teachers, private educational firms and non-profit organizations could exchange experiences and find experts. They held contests with prizes for those who could generate the public’s interest through mass media so that teachers and students would have a goal to aim for.

Another initiative of the Ministry of Economy was mobilizing the private education sector on a mass scale, funding educational firms and non-profit organizations to give entrepreneurship classes at school. There were pros and cons to this. An advantage was that Entrepreneurship Education became widely implemented in a short period, with schools able to introduce know-how without cost. Unfortunately, schools and teachers were passive, so when the Ministry of Economy terminated the initiatives most schools quit Entrepreneurship Education.

Ms Ueno stated though that there had been a sign of a shift in policy since the Ministry of Economy and the Ministry of Education started working together in preparation for the “Restart” of Entrepreneurship Education.

KEY THEMES OF THE SESSION

- The adoption of national policies for entrepreneurship in education and training.
- The response of the education system to socioeconomic challenges.
- Placing entrepreneurial people at the heart of change processes.
- The strategic reasons behind the decision to develop an entrepreneurship curriculum.
- The broader concepts of entrepreneurship, including attitudes, skills and knowledge.
- The introduction of new concepts, contents and teaching methods.
- The positive changes observed in the behaviour of students, graduates, teachers, families, schools and communities.

SESSION PARTICIPANTS

Moderator:

- Her Excellency Bente Angell-Hansen, Ambassador, Permanent Mission of Norway to UNIDO

Panellists:

- Diasala Jacinto André, National Programme Coordinator, National Institute for Research and Development of Education, Angola
- Simone Baldassarri, Policy Officer, DG Enterprise & Industry, European Commission
- Constance Mbabazi Kateeba, Director, National Curriculum Development Centre, Uganda
- Her Excellency Fernanda Maria Brito Leitão Marques, Minister, Ministry of Education and Sports, Cabo Verde
- Senseri Mtatiro on behalf of Joyce Musabe, Deputy Director General, Rwanda Education Board, Rwanda
- Gabriele Ott, Industrial Development Officer, UNIDO
- Ivaldo Quincardete, National Director Secondary Education, Ministry of Education, Mozambique

Continued...

- Ivaldo Quincardete, National Director Secondary Education, Ministry of Education, Mozambique
- Patrick Simalumba, Deputy Director, National Institute for Educational Development, Namibia
- Hiroko Ueno, Senior Policy Analyst, Policy Research & Consulting Division, Mitsubishi UFJ Research and Consulting Co., Japan

WAY FORWARD

- Youth unemployment is a major motivation for investing in future entrepreneurs, but should not be the only one: all countries need innovation, change and entrepreneurship.
- Entrepreneurship education should not only focus on start-ups, but a much wider set of competencies, attitudes, skills and knowledge that help people to be more entrepreneurial.
- Entrepreneurship should be an integral part of studies as early as primary education, with coherent progression to higher education.
- Investment planning starts with bringing all relevant ministries together, followed by the engagement of business organizations and civil society.
- Each country requires an individual strategy that fits its context and particular challenges.
- In many countries, educators particularly need to promote entrepreneurship in agriculture, the informal sector and the extractive industries.
- Countries should exchange their experiences in policy development through networks on entrepreneurial learning.

SESSION II: PRIVATE SECTOR – A CRUCIAL PARTNER?



Summary of the Presentations

The second day session's topic was of the private sector being an important partner for Entrepreneurship Education. **Ms Friederike Soezen, Policy Expert of the Department of Educational Policy, Austrian Federal Economic Chamber** was introduced as the moderator.



Friederike Soezen

Ms Soezen began by stating that the Austrian Chamber of Commerce had been engaged in Entrepreneurship Education for 30 years with programmes like the Entrepreneurship Skills Certificate and the Junior Achievement Programme. The Chamber believed that a mixture of theoretical and practical training, entrepreneurial qualities and competencies were needed not only for self-employed persons, but also for employees and business. Ms Soezen added that entrepreneurship was a lifelong learning process and should start as early as possible. She then introduced **Mr Cosmas Maduka, President and CEO of the Coscharis Group in Nigeria.**

Mr Maduka described his story as simple: mentorship, role models and seven years of apprenticeship were instrumental for him. They taught him the culture of hard work and that for a business to endure there should be a clear vision and a growth strategy, actualized through prepared and structured organization and effective leadership. His role models were organizations like Leventis. He emphasized that it was important to be patient and go through the process of becoming rich and embracing the caution of hard work.

Mr Maduka enumerated some lessons he gathered from experience with Coscharis that he considered



Cosmas Maduka

as “10 commandments” for small and medium sized businesses. First was to have a clear vision; second was to translate your dream into reality through hard work and determination; and third was to find the seed capital. He emphasized and quoted Robert Kiyosaki – don’t work for the money, work to learn something. Fourth was to hire professional managers and write clear job descriptions and fifth was to build a team out of them. The entrepreneur had to be able to sell his or her vision to their staff and give them authority. Sixth was to be persistent and stay focused; to stay in your core area and not get distracted by other opportunities. Seventh was constantly reviewing your business strategy. Eighth was not to spend too much money on office and activities and also not to pay yourself all that you want. Ninth was to keep a proper record of all transactions. Lastly, it was important to constantly research the market and make sure products remained relevant at all times.

Ms Soezen then asked Mr Maduka about the importance of choosing staff. Mr Maduka explained that staff should have the following key competencies or skills: self-confident, innovative, enterprising, risk taking, willing to do things by himself/herself and decisive. For Mr Maduka, the most important was to have ownership spirit. He or she had to be less temperamental. He or she also had to be a team player, someone that could create synergies among colleagues and interact freely. He would demand a survivor instinct, an eclectic mind, good negotiating skills and good time management.

Ms Soezen asked another question: what can education do? Mr Maduka answered this by emphasizing the skills acquired when in school. Learning outcomes counted, not the amount of years one spent in school. The education system needed a paradigmatic change in the way it thought about creativity, innovation and leadership. Real examples of what they had done and achieved should be provided by entrepreneurs. Mr Maduka talked about the Coscharis Technology engineering partnership programme where undergraduates received insights into understanding and designing for end-users, management skills, effective communication, thinking creatively, understanding the basics of business, problem solving or solution finding.

Ms Soezen thanked Mr Maduka and introduced the next panellist, **Ms Maria Strommer, Human Resources Manager of the Human Resources and Organization Development of Zeta Biopharma GmbH in Austria.**

Ms Strommer gave a brief background of her company, which had 150 employees, of whom 80% had technical jobs and 20% were in administration and finance. She stated that the most important thing was for the employees to have a basic understanding of the daily business, and that they should use their creativity and be innovative. They needed to have an understanding of basic economics and the tools to use them.

The next panellist introduced was **Mr Kiyotaka Morita, Manager of the International Cooperation Bureau of Keidanren (Japanese Business Federation), Japan.** His presentation was on what an entrepreneur should be from the Japanese business point of view. He gave a brief background of Keidanren, a comprehensive economic organization with a membership comprising 1,309 major companies of Japan and 112 nationwide industrial associations (as of 1 July 2014). Keidanren’s mission was to draw upon the vitality of corporations, international and local communities to support corporate and social activities that contribute to the self-sustaining development of the global and domestic economy. For this purpose, Keidanren established consensus in the business community on issues such as economic and industrial policy, trade and investment, economic cooperation and human resources development for their steady and prompt resolution. Keidanren was policy- and member-oriented.

Mr Morita gave some examples of human resources development by member companies. One was

the establishment of a vocational training school overseas. Graduates were expected to be hired as engineers by local subsidiaries in those countries. Hired engineers would travel to Japan to have vocational training there for a year or two. There was also on-the-job training aiming at fostering future managers and directors. Local subsidiaries were expected to be managed and operated by locally hired personnel. Another example was technical transfer through on-the-job training. There were examples of employees promoted to managing director of the local subsidiaries or becoming an entrepreneur.

He reviewed the programme of the African Business Education Initiative for Youth, initiated by the Government of Japan and supported by Keidanren. It offered opportunities for young and eligible African candidates to study Master's courses in Japanese universities and to experience internships at Japanese companies in order to develop skills for contributing to the development of industries in Africa. A total of 900 candidates were expected to study in Japan. The programme aimed at fostering future entrepreneurs, managers and government officials. Keidanren was cooperating with the Government of Japan as regards internships.

Lastly, Mr Morita talked about what they expected of the entrepreneurs. First, they expected them to collaborate with foreign investors as business partners. Second was to work with respective governments to enhance the business environment. He emphasized and agreed with Professor Fayolle that entrepreneurs had to contribute to human resources development and job creation.

Ms Soezen then introduced **Ms Selma Prodanovic, Founder and CEO of Brainswork GmbH in Austria**, who introduced herself as a passionate entrepreneur, a philanthropist and a so-called business angel. She touched on the role of entrepreneurs, which was to create solutions for tomorrow – encouraging and empowering people to think in solutions.

Ms Prodanovic emphasized that there was no single solution. There was a need to adapt and no one solution would fit all. From the resources they had, entrepreneurs created something very special and unique and they went out to the market with that. Ideally, they created a solution that fit many other people.

Ms Prodanovic shared her favourite example of entrepreneurs, in which four of the founders had

diabetes. They developed a solution that fit with their everyday life; and with that solution they created a solution for 760 million people in the world. She also talked about what we could learn from children – curiosity. They found ways to make solutions and not only ask why, but why not. Ms Prodanovic emphasized that we could teach youth the importance of experience, but there was no longer knowledge that was forever; the speed of entrepreneurship was fast. Quick adaptation and flexibility were necessary. The role of educators and role models was to treat children as equals and teach them to deal with those things they have. She ended with a message to the audience to believe in their power, and to encourage others and treat youth as equals.

Ms Junita Ciputra, Managing Director of the Ciputra Group in Indonesia was the next panellist introduced. She talked about the Ciputra Group and what they had done to promote entrepreneurship skill and spirit in the people of Indonesia. The family enterprise, founded 30 years earlier, had 70 projects all over Indonesia, China, Cambodia and Vietnam. Its vision was to inspire and create four million new entrepreneurs, contributing to employment in the country, especially among youth and graduates from higher education institutions. Thus, the vision aimed to fight poverty and to close the gap between rich and poor.

Since 1995, Ciputra had lobbied for Entrepreneurship Education in the curriculum. Ms Ciputra discussed their four organizational



Junita Ciputra

vehicles. The first was Universitas Ciputra, which focused on higher education with Entrepreneurship as the main theme. The final project was to own a business or social project. The second was the Universitas Ciputra Entrepreneurship Center, which spread entrepreneurship to various communities all over Indonesia. The third, Universitas Ciputra Entrepreneurship Online, was a massive, open, online course to reach out to Indonesians all over the world with entrepreneurship learning. Fourth was the oldest programme, Ciputra Schools, a K–12 school system that promoted and integrated entrepreneurship in the curriculum.

Ms Ciputra went back to the question of how to become a successful entrepreneur. She answered this with the motto of the company: integrity, professionalism and entrepreneurship. The necessary soft skills needed for opportunity identification were social networking, creative and persuasive communication, and partnerships. For identification, one needed collaborative work and leadership. The necessary hard skills for opportunity identification ranged from recognizing to creating the opportunities. It was necessary to have creativity and innovation in business, have design thinking and be able to take risks.

She enumerated five unique features of Universitas Ciputra. They had compulsory e-courses for all students and an entrepreneurship day (every week) with mentors called entrepreneurs in residence. On that day, students would team up with the entrepreneur in residence for student mentoring. The university also allowed students to venture into start-ups for experiential learning. They also provided an e-clinic, where students could consult and receive coaching.

Ms Ciputra emphasized how the business community expected the educational sector to create job creators and not job seekers. In Universitas Ciputra's class of 2014, there were 179 business ventures formed and 941 jobs created by the 473 students who graduated. The Entrepreneurship Center had trained more than 10,000 people, ranging from Indonesian migrant workers in Singapore, Malaysia, Korea and Hong Kong to lecturers, teachers, government officials, students, micro-business owners, street children and even ex-sex workers. Entrepreneurship Online was established in 2013 and they had more than 34,000 registered users from more than 100 countries and 1,000 cities. The K–12 schools were established in 1995 in nine cities, with over 5,712 students to date.

Ms Soezen then invited **Mr Zenebe Tesfaye Adnew, Managing Director of Selam Children's Village in Ethiopia**. Mr Adnew described how the Children's Village looked out for orphaned children, managing several educational institutions and vocational training centres. Their goal was to create a conducive environment for youth where they can stand on their own feet.

The afternoon session started with a presentation from **Mr Takeru Ohe, Advisor for Waseda University in Japan**. He spoke about the collaboration of universities and high schools with local small and medium-sized enterprises (SMEs) as part of Entrepreneurship Education.

Mr Ohe first explained the Learning By Helping programme, which was a joint programme of Waseda University and Sumida City in Tokyo agreed upon in 2002. The programme followed a triangle structure: students–SMEs–universities. The model created a win–win situation because the students were tasked with practical cases provided by the universities. The companies then got new and innovative ideas from the students. In 2003, the programme was introduced to other Asian countries as Consulting Based Learning for Asian SMEs (COBLAS), and was first implemented in Thailand.



Takeru Ohe

The standard programme had three phases: lecture, field trip and development phases. Students developed ideas to make companies more profitable. In the wake of the ASEAN integration, the Born ASEAN project would contribute to the vitalization of the ASEAN economic community by making SMEs into Born ASEAN SMEs, helping students to become ASEAN businesspersons and universities to become Born ASEAN universities.

Mr Ohe shared that after the nuclear power plant disaster in Japan in 2011, the COBLAS programme provided children with art therapy sessions in day-care centres. Designs of high school students were manufactured by a goods-making company and a company producing wetsuits.

The Waseda Venture Kids Program, which Mr Ohe started in 1998, was created because he believed that entrepreneurship was a natural instinct that education and family sometimes killed, which was why Entrepreneurship Education needed to be fostered at an early stage in life. Teaching MBAs entrepreneurship was too late – the Japanese education system was not encouraging taking risks and making mistakes. University students helped children open their own shops in trade fairs. This activity allowed university students to learn the entrepreneurial spirit and the children to learn business basics and how to be creative.

Ms Soezen then introduced **Mr David Groenewald, Entrepreneurship Education Expert from Namibia.** His presentation was about the private sector's involvement in the development of the curricula for Entrepreneurship Education.

Mr Groenewald gave a brief background of the development of Entrepreneurship Education. Regulations for all learners to have access to Entrepreneurship Education came out in the year 2000. The National Institute for Educational Development was made responsible for this development, from curriculum development to research.

According to Mr Groenewald, the private sector contributed by participating in the curriculum panel and the steering committee, which were basically present throughout the whole process. The private sector became not just a donor but also a partner and was involved in the planning, what to do, how to do it, and when to do it, in the objectives and in the outcomes. Textbooks were designed with inputs from the private sector, working groups were established and constant feedback was required.



David Groenewald

The next part of the development was training teachers. The private sector participated in the design of the training approach and became co-teachers of trainers.

Mr Groenewald raised the issue of what the private sector needed. There was a problem with society wherein the private sector and the community operated on different islands, so there was too little interaction and learning from each other. Entrepreneurship was also constantly changing, so it had to be developed, and this was not just about business. Mr Groenewald emphasized that private sector inputs should be recognized. He encouraged giving the private sector the branding and promotion opportunity. He encouraged creating structures for representation and including the private sector in planning preparation. Rather than having them as donors, partnerships could be formed. Liaison officers that facilitated linkages between the private sector and education could be identified.

To bridge the gap between the private sector and break down the barriers, one had to be organized. Mr Groenewald suggested that the government should assign a particular person exclusively to development of Entrepreneurship Education. The private sector was sometimes reluctant due to unfavourable government policies. There was also a shortage of private sector actors in rural areas.

Mr João Litsuge, Head of the National Technical Working Group on Entrepreneurship of the National Institute of Education Development in Mozambique talked about the experience in his country. The

relationship between the private sector and the schools depended on the provinces; there was no national programme with the private sector like in Namibia. Directors of schools were responsible for cooperation with the private sector. When a school was well organized and the private sector saw how well the school was performing, it could provide inputs to and participate in the delivery of the curriculum. According to Mr Litsuge, the programme had brought positive results and enterprises were interested in graduates, seeking them as employees.

Mr Diasala Jacinto André, National Programme Coordinator of the National Institute for Research and Development of Education in Angola shared that Chevron had shown great interest in the entrepreneurial programme in his country. The work was carried out at the national level and Chevron supported the Ministry of Education through UN agencies, particularly for the training of teachers. Chevron also funded the development of textbooks and the methods for teachers at the local level. Each school was supported in the establishment of local partnerships and with their involvement in micro- and medium-size enterprises. Challenges remained, although teachers had been trained to develop negotiation skills with companies because that will guarantee the ultimate success of the programme. Mr André added that a communication strategy was created to make the programme well known, such as having a TV spot at prime time to create awareness among students, parents and entrepreneurs of this topic. Initially, there had been some resistance in the public and private sectors to allowing students to visit their facilities and learn about their business.

Mr Billy Butamanya, Entrepreneurship Curriculum Development Expert at UNIDO in Uganda also shared his experience of working in West Africa, which started in the Najala University in Sierra Leone and the Monrovia University in Liberia. The entrepreneurship programme was for all of their third-year students. Students learned concepts in lectures and then went to communities to work with SMEs and real life situations. Universities aimed to become centres for entrepreneurship excellence.

Mr Julius Mugisha, General Operations Manager and Owner of Serve and Smile in Rwanda and an ECP graduate shared how he became a successful entrepreneur. In the course, he learned self-motivation, creativity, persistency and competitiveness. Working five jobs, he realized that money is not important; what counts is experience.



Julius Mugisha

Serve and Smile was created after considering the market. He sold cooking stoves that used less firewood. A businessman approached Mr Mugisha to sell solar products for him. He agreed, and currently employed 123 people (13 permanent and the rest on a margin sale payment). Distribution of staff allowed maintaining channels to the rural areas. Mr Mugisha supported schools by encouraging young people, by inspiring them and helping students take away their fear of failing.

Ms Soezen introduced **Mr David Chakonta, Director General for Technical Education of the Vocational and Entrepreneurship Training Authority in Zambia** by asking how the private sector could be engaged in establishing cause, standards and qualifications in Entrepreneurship Education.

Mr Chakonta indicated that there were two ways to engage the private sector. The first was based on the existing structures. The Training Authority board represented the private sector, and on this board was the National Chamber of Commerce and Industry, Chamber of Small and Medium Businesses, the Zambian Federation of Employers and the Zambia Congress of Trade Unions. Second was the actual development of the curricula. There was a policy in place stating that the curricula had to be revised every 3–4 years. Market signals had to be validated and a panel of experts interacted with curricula development specialists. Draft curricula were circulated to industry experts. This was part of the validating process; afterwards, the subcommittee of the Training Authority board approved it. At the



David Chakonta

implementation level, there were industrial visits. Every college had its own relationship to the local industry.

The first curricula had a “one size fits all” framework. After the revision, the practical side was taught in the lower levels and the theoretical aspects in the higher grades. Mr Chakonta emphasized that interaction with industries needed to be continuous.

The programme produced two types of graduates: one with a salary worker pathway and the other with an entrepreneur employer pathway. Both pathways had an entrepreneurship module in their curricula.

The final presentation was from **Mr Víctor Arias, International Manager of Tknika Centre for Innovation in Vocational Training in Spain.**

Mr Arias discussed how in Spain, the involvement of the private sector first started with taking part in the design of the curricula at a national level. There were different national level bodies starting with the General Council, which was in charge of the planning and approval. Second was the National Employment Service, which was in charge of determining the needs of the companies. The third was the National Institute of Qualifications, which was in charge of elaborating the content of the curricula.

The second opportunity for the private sector was to be involved in vocational training through collaborations in traineeships, internships and apprenticeships. Schools had to open up to the

private sector in order for students to learn three important concepts: innovation, entrepreneurship and internationalization. Collaboration would be easier when companies realized that students could become an asset for them, thus giving a win-win situation. Students of vocational and technical schools needed to be entrepreneurial. Students and their start-ups could learn from the private sector. Vocational institutes needed to create the environment to be able to share aims, objectives and initiatives.

Mr Arias also pointed out that it was important to know the skills required by employers. The European Commission came out with a report that the European educational framework had three main concepts: knowledge, skill and competence. These skills were then divided into vocational, specialized vocational and transversal skills. European companies agreed that vocational training institutions were doing well, but specialized skills need to be developed. There needed to be coordination with training institutions. There was also an agreement on the gap in terms of transversal skills – attitudes, behaviour and values – which were cultural factors that led to innovation. Mr Arias ended by emphasizing the need for training institutions to collaborate with the private sector.

Ms Soezen asked Ms Prodanovic what she thought made good cooperation between business and education. Ms Prodanovic emphasized that the role of media should not be underestimated, as it affected culture. Media could be a good tool. According to



Victor Arias

her, we should not forget to ask youth and take their interests into consideration. The world was changing quickly and we might not know anything about the jobs that will be available in the future.

Ms Soezen also asked Mr Adnew to briefly present their cooperation with Volvo. He explained that the model of Spain applied to the Selam Children's Village. Mr Adnew stated that they trained students well and that there was a committee that represented both the private sector and the training institution. Volvo supported the education, because they provided apprenticeships for the graduates, which qualified them in such a way that they would be employed by companies.

KEY THEMES OF THE SESSION

- Envisioning the private sector's role beyond financial and material support.
- The involvement of the private sector in curriculum design, content and methods.
- Inspiring and educating teachers and students about the real business world.
- The triple win for youth, employers and the government.
- The skills employers seek in prospective recruits.
- Promoting public and private dialogue and cooperation.
- The best practices in cooperation at the local, national and international levels.

SESSION PARTICIPANTS

Moderator:

- Friederike Soezen, Policy Expert, Department of Educational Policy, Austrian Federal Economic Chamber, Austria

Panellists:

- Junita Ciputra, Managing Director, Ciputra Group, Indonesia
- Cosmas Maduka, CEO, Coscharis Group, Nigeria

Continued...

- Takeru Ohe, Member of the Board of Cognex, Japan, and former Professor, Waseda University, Japan
- Selma Prodanovic, Entrepreneur, Business Angelina, Austria
- Julius Mugisha, Graduate and young entrepreneur, Rwanda
- David Chakonta, Director General, Technical Education, Vocational and Entrepreneurship Training Authority, Zambia
- Víctor Arias, International Manager, Tknika Centre for Innovation in Vocational Training, Spain
- Kiyotaka Morita, Manager, International Cooperation Bureau, Keidanren (Japan Business Federation)
- David Groenewald, Entrepreneurship Education Expert, Namibia
- Zenebe Tesfaye, Managing Director, Selam Children's Village, Ethiopia

WAY FORWARD

- The private sector should be a source of partners as well as of donors.
- Individual liaison officers can facilitate linkages between the private sector and education.
- It is important for training institutions to know the skills required by employers, especially where specialized skills are needed.
- It is powerful for entrepreneurs to offer students real examples of what they have done and achieved.
- On-the-job training in entrepreneurship can foster future managers and directors.
- Consulting-based learning, in which universities provide students with practical cases from private companies, stand to benefit all participants.
- The private sector does not need to wait for the government to ask them to partner. They can successfully initiate efforts as well.

SESSION III: TEACHERS FOR ENTREPRENEURSHIP



Summary of the Presentations

Fostering entrepreneurial attitudes in youth requires a learner-centred and action-oriented approach, where teachers serve as facilitators for the development of entrepreneurial competencies, rather than simply passing their knowledge to students. How should teachers prepare themselves

for this new role? How can the education system assist them? What challenges do teachers and education officers face? This session addressed these questions and focused on the training of teachers.

Mr Anthony A. Gribben, Head of Enterprise and Entrepreneurship of the European Training Foundation in Ireland moderated this session. After warmly welcoming the participants, he explained that this session would focus on the “why, what and how” of teachers’ engagement into Entrepreneurship Education. He then clarified the structure of the session. Presentations by three experts would be followed by a working group session during which participants would break out into three groups, each focusing on a specific pre-defined theme. Subsequently Mr Gribben introduced the three experts who would facilitate the groups. The plenary session started with **Ms Jaana Seikkula-Leino, Adjunct Professor at the University of Turku in Finland** who presented the Finnish experience in preparing teachers for Entrepreneurship Education. Second was **Mr João Litsuge, Head of the National Technical Working Group on Entrepreneurship of the National Institute of Education Development in Mozambique** who presented Mozambique’s experience. Third was **Mr Colin Jones, Senior Lecturer at the University of**



Anthony Gribben



Jaana Seikkula-Leino

Tasmania in Australia who talked about how teachers can bring forward their self-development.

Ms Seikkula-Leino started by giving a background of Entrepreneurship Education in Finland, stating that Finland has had a national strategy for Entrepreneurship Education since the 1990s. All institutions were expected to take part. However, universities had been autonomous and did not necessarily follow the national strategy. In implementing the strategy, Finland faced several challenges including curricula which did not entirely support Entrepreneurship Education, teachers who were not prepared for the subject, and limited cooperation among educational institutions and the world of work and enterprise. To overcome these challenges, Finland launched the YVI project (2001-2004), aiming at developing pedagogics of Entrepreneurship Education in academic and vocational teacher education as well as networks and a virtual learning environment for Entrepreneurship Education.

The project had resulted in the development of specific curricula, teaching methods and tools for academic and vocational teacher education in Entrepreneurship Education, new modes of cooperation among institutions and the private sector, a YVI learning platform for Entrepreneurship Education with approximately 3,000 visits each month, and multi-disciplinary research. For the success of Entrepreneurship Education, Ms Seikkula-Leino emphasized the critical importance of fostering networking among local areas and regions,

development of self-evaluation and self-assessment tools and peer learning through online tools. Despite the success, Ms Seikkula-Leino highlighted that several challenges lie ahead: institutionalization of pre-service teacher training, empowerment of networks, strengthening of supporting structures and fostering of operational cultures in schools. She saw that it was necessary to defend Entrepreneurship Education, as it was not part of traditional teaching and there was a certain reluctance towards it.

Mr Litsuge presented Mozambique's structure for in-service teacher training. His presentation considered the why and the how.

Mr Litsuge addressed the question of why teachers who were already in service should be trained. The answer was there was a lack of trained teachers in matters of entrepreneurial pedagogy. Also, it would ensure understanding and proper teaching of Entrepreneurship Education.

In Mozambique, the Government agreed that in-service teachers were the priority because entrepreneurship teaching demands new skills and a mind-set away from the conventional passive learning approach. According to Mr Litsuge, teachers needed to be dynamic, creative and able to accompany the students and talk to parents and families. Gender equality and geographical coverage were considered when choosing teachers. Female participation in training had to be stimulated and there was a requirement of a minimum of three years of teaching experience.



Joao Litsuge

Regarding the content, training would cover entrepreneurship pedagogy, entrepreneurial culture, entrepreneurial plan, evaluation criteria of entrepreneurial plan, teaching aids and assessment.

Training was conducted through plenary sessions, working groups, group presentations and sessions on training facilitation. These methodologies had different models. The first was the ideal model, with a 15-day, 84-hour programme. This had increased availability of time to exercise and practice activities. It simulated business environments on the ground and covered greater breadth of content. Since it was organized by regions, it required many resources. Because of this, a cost-reduced model was created with a 6-day, 54-hour programme. This did not affect the number of participants, but allowed a regional approach for greater involvement and increased participation. The shortened time resulted in limited consideration of some content, but maintained quality. The third model had a 5-day, 30-hour programme, which was not possible to implement on a regional level. It had a reduced number of participants and was restricted to schools in a certain area. The content was treated in a general form to allow a detailed exploration of more relevant content.

Mr Litsuge enumerated some of the skills resulting from the programme. The programme developed entrepreneurial attitudes and personal capacities, taking into account the fundamental pillars of education: be, know, know-how and make it happen. Teachers were trained in methods of teaching students to develop their personal and professional lives, making connections with the local environment, in order to seek out alternative job opportunities and businesses.

Mr Litsuge concluded by talking about future plans. First graduates of the course would soon be teaching entrepreneurship as a stand-alone subject or transversal matter. The centre for training of pre- and in-service teachers was in place and ensured continuous training.

The next panellist introduced was Mr Jones. He indicated that he would speak as a passionate entrepreneurship educator. He explained the title of his presentation – “ACADEMOGOGY: elevating the student’s role and challenging the educator’s role”, which emphasized the student’s heart and finding what students feel passionate about.

Mr Jones explained that the challenge was that the student’s destination was quite unknown. He



Colin Jones

mentioned that the very comprehensive Finnish system was a role model. He also cited Michael Roy Heath’s findings in 1960 that some students were very capable of creating opportunities for satisfaction. Mr Jones offered his students the possibility to develop these attributes. He emphasized that you have to have objectives in life; otherwise, you are not going to achieve anything. To address the challenge, he argued that students should be taught a combination of Enterprise Education, which would give them the right mind-set, and Entrepreneurship Education, which would give them knowledge of business outcomes.

Mr Jones clarified some definitions of terms. He explained that pedagogy was what the teacher did to the student. Endrogogy was moving from the educator making the decision to the freedom of the student. Heutagogy was self-determined learning; it was when the student decided what he or she wanted to focus on learning. He, then, explained the main challenge for a teacher, which was how to ensure the development of curiosity for entrepreneurship in students, the engagement and the comfort with it. The goal was to make students capable of this self-negotiation action and create the ability to acquire these resources, which were required to undertake this action. Teachers had to engage in endrogogy, which is scholarly leading. Students had to be given the opportunity to move forward, to fail, but they should always be passionate about what they do.

Mr Jones moved on to how teachers should change attitudes. He quoted Taylor in 1949: education is the

process of changing behaviour patterns of people – using behaviour in a broad sense to include thinking, feeling and overall action. From his perspective, it was about building relational trust, not assessment of outcome but assessment of procedures.

He also addressed how an entrepreneurship teacher should be. Teachers should not be the main feature and should rather be invisible and just be there to support and not stop students from moving forward.

To give a picture of how an entrepreneurship student should be, he quoted Ruskin in 1917: if someone knows where they are at, and knows where they are going, the best thing you can do is to understand these circumstances. He emphasized that every student was different; so, teachers should play different roles for each student.

To play this role, (Mr Jones quoted Arthur Ashe), teachers should “start where you are, use what you have and do what you can.” Mr Jones advised that it was important to go through the education literature of 1900–1950 and find oneself in relation to a philosophy, develop a teaching philosophy and share it with everybody. The more one talked about it (with students, other teachers and mentors), the more one thought about it. The aim was to provide an environment for students where they could feel safe to fail.

He added that one had to listen to one’s heart and let it choose the right direction. Confidence was required, because no one knew where the journey would lead.

For education systems to assist in this process, they had to have context appreciation. There was no best practice. Different settings had to be taken into consideration. Education systems needed to facilitate exchange. Ministries of education could help develop a philosophy of learning. Mr Jones advised not assessing educators or students with pedagogical approaches, when they are most likely using endogonic and/or heutagogic approaches.

Mr Jones expressed some of the challenges teachers and education officials faced. Setting expectations was important. He encouraged not over-promising, because the students’ futures are unknown. He added that students might learn more outside of institutions, that they had to be allowed to test their assumptions outside of the institutions, and that a lot of mistakes should be expected.

Then, participants broke up into groups each focusing on one of the following issues: a) in-service

teacher training, b) pre-service teacher training and c) teacher-driven development activities. After discussing, the groups came back to report their insights on the assigned topics. The first report was from the group that looked at the in-service teacher training. The group’s representative summarized that for teachers training to serve the development of the country, the policies of the government should be clear. Teachers had to understand the importance of the subject and where it would lead students. The content also had to be contextualized because what was needed in one country might not be needed in another. The teachers’ and learners’ backgrounds and profiles also had to be considered since some might have business backgrounds already and others might not. The quality of training materials would help teachers guide them further. It was important to note limitations of training, especially on a large scale. There were limitations concerning budget and time. The mode of training ought to be practical with a “learning-by-doing” approach. The private sector ought to be involved in the development of learning materials. The mind-sets of all role players needed to be changed, since the overall objective was for the development of the country. Educators should see how they would fit in attaining this objective.

The representative of the group that looked at pre-service teachers addressed the question: how can entrepreneurship be included in pre-service teacher training? He listed some of the possibilities and actual demands. First was having a policy framework, and second was the existence of teacher training centres and colleges. Again, there should be cooperation between the economic and educational faculties at universities and a desire for change in universities and other training institutes. Lastly, there should be a change in the curricula that creates a demand for pre-service teacher training.

The group also looked at challenges that pre-service teacher training faced, and the representative enumerated these. Convincing leaders and stakeholders to embrace Entrepreneurship Education was a challenge. There was also inadequate understanding of the subject, since it was often equated with business studies. Lack of funds hindered implementation of training. There was a disconnection between universities and ministries of education because of lack of synergies.

The group recommended a comprehensive policy framework for pre-service teachers and conducting training. A political commitment would guide all

efforts. Also, efforts for integrated teacher training programmes and adequate allocation of funding at local and global levels were needed. Partnerships between schools and training institutions should be formed.

The last group examined teacher-driven development. Their representative started by enumerating the barriers to teaching and giving the corresponding solutions. Many teaching materials were needed, so they proposed that it was best to create an online platform. There was a perception that Entrepreneurship Education was only for strong economies. This had to be addressed by governments putting policies in place. Another perception was that entrepreneurship equalled business. This could be overcome by presenting role models in the media. Teachers were not aware of the importance of the subject. Raising awareness, getting teachers involved and making them see the social benefit would help alleviate this. Teachers had no entrepreneurial culture, and this could be improved by training and using media to educate them. Entrepreneurial education was too theoretical and should be more project-based learning than theory. There was a lack of motivation in teaching entrepreneurship that could be countered by creating opportunities for exchange, which could be part of teacher training. Lastly, the group expressed that the education system did not favour different teaching approaches. Instead, teachers should be involved in the development of projects, plan study tours and encourage political support. Entrepreneurship Education needed to be part of the national education policy.

Mr Gribben then summarized the common things that were discussed. Awareness raising had to be done in society and among key stakeholders and representatives of the education ministries even before training and implementation. There had to be a professional communication strategy to help everyone understand what entrepreneurship was about and what it was not, as well as the implications for students and teachers, parents and schools, and employers. Policy framework, political will and commitment, and cooperation between ministries of education, economy and finance in terms of budget had to be present. People behind higher education policy needed to drive the initiative for connection of in-service and pre-service teacher training. Higher education institutions needed to contribute to the broader national development, connect experts better and create efficiency. Lastly, an online learning platform ought to be established.

Other participants added to Mr Gribben's conclusions. **Mr Suhail Sultan of Palestine** added that different government structures needed to be taken into consideration. Mr Groenewald of Namibia challenged the comment on theoretical teaching methods. This was related to the assessment method being used, and the assessment structure had to be practical in order to make teaching more practical. Ms Wannberg added that pre-service teacher training happened in faculties of education, but the content of entrepreneurship was taught in faculties of economics, where most graduates did not eventually follow a career in teaching. The solution was to start from the bottom and create awareness to encourage them to teach.

Mr Jones closed the session by stating that teachers had to break some rules from time to time and do things a bit differently.

KEY THEMES OF THE SESSION

- The shift in approaches towards entrepreneurship teaching.
- The limitations of traditional teaching methods.
- The development of soft entrepreneurial competencies during schooling.
- Preparing teachers to support entrepreneurial youth effectively.
- Active learning methods and action-oriented approaches.
- Facilitating and enabling learners to explore their entrepreneurial mind-sets.
- Developing links and resources to support teaching and learning.

SESSION PARTICIPANTS

Moderator:

- Anthony A. Gribben, Head of Enterprise and Entrepreneurship, European Training Foundation, Ireland

Panellists:

- Colin Jones, Senior Lecturer, University of Tasmania, Australia
- João Litsuge, Head of the National Technical Working Group on Entrepreneurship, National Institute of Education Development, Mozambique
- Jaana Seikkula-Leino, Adjunct Professor, University of Turku, Finland

WAY FORWARD

- Since Entrepreneurship Education is relatively new, it calls for adjustments in the operational cultures of schools.
- Different approaches are needed for in-service and pre-service teachers.
- Entrepreneurial education should be based on project-based learning.
- The participation of female teachers may need to be encouraged for gender balance.
- Ministries of education can help develop philosophies of learning.
- Teachers need to understand the importance of the subject, where it will lead students and how it fits into the country context.
- Teachers need to have an entrepreneurial culture and understand the personal and social benefits of Entrepreneurship Education.

SESSION IV: CHALLENGES IN ASSESSING LEARNING OUTCOMES



Summary of the Presentations

The session analysed how entrepreneurial competencies can be assessed, what contextual factors influence the acquisition and application of entrepreneurial competencies, and how the impact can be observed over the medium- and long-term.

Ms Adot Killmeyer-Oleche, Chief of the Quality Monitoring Unit of UNIDO moderated the morning session.

The discussion started with a presentation on organizing Entrepreneurship Education by **Ms Andrea-Rosalinde Hofer, Economist at the Local Economic and Employment Development Programme of the OECD**. Ms Hofer explained that her programme had an interest in Entrepreneurship Education as an approach to contribute to local development. Its interest focused on obvious and non-obvious learning outcomes such as the development of knowledge, skills, attitudes, new start-ups and venture creation. In collaboration with the European Commission, the OECD had developed

two projects – one for higher education institutes and one for schools and vocational training institutions.

She introduced HEInnovate, a collaboration project where trends in the organization of Entrepreneurship Education could be seen and business start-ups supported in higher education institutions. The approach was to set up a steering group that involved several ministries and higher education institutions. Ms Hofer explained that HEInnovate was a self-assessment tool that allowed higher education institutions to map out their status quo on leadership and governance, organizational capacity, teaching and learning, pathways for entrepreneurs, knowledge exchange, internationalization and measuring impact, and to identify and strategically develop hidden opportunities.

Ms Hofer showed that teaching methods were assessed, including business plan writing, case studies, business games and simulation, experience reports by start-ups, entrepreneurs as guest speakers and visits to companies. She presented information from three countries – Bulgaria, Poland and Germany – which had governments with a strong

interest in promoting entrepreneurship. Yet, lectures in frontal teaching and business plan writing were still being used very often.

The second project presented by Ms Hofer was Entrepreneurship 360, which provided the perceptions of the relevance of Entrepreneurship Education in schools and vocational education and training institutions across Europe. It was a freely available self-assessment instrument that would support institutions and individual teachers in advancing their strategies and practices to promote entrepreneurship, as well as to develop a platform for exchange among peers. Entrepreneurship 360 gave the opportunity to individuals, schools and vocational education and training providers to learn from each other's practices and share their own.

In the long run, OECD aimed to use the collected data to inform public policy to improve the framework for Entrepreneurship Education. They wanted to achieve capacity upgrading in education institutions, such as use of tools, signals, opportunities and barriers; learning materials like case studies and guidance notes; and international networking opportunities.

Mr Simone Baldassarri, Policy Officer of the DG Enterprise and Industry of the European Commission expressed that impact assessment of Entrepreneurship Education was important in order to determine which methods work best and which do not; which skills are fostered and which are not. This was also needed to justify the investments made.

Led by the Danish Foundation for Entrepreneurship, the European Commission together with several



Simone Baldassarri

European institutes had developed measurement tools for assessing entrepreneurial skills, knowledge, attitude and mind-sets among students and pupils, and promoted the use of these tools across educational institutions in Europe. The team produced the ASTEE framework to be applied to students before and after the course. The questionnaires assessed entrepreneurial skills, mind-sets, career ambitions and connectedness to education, and relationship to teachers, and was available online for free use. He added that this tool had also been used by UNIDO with adaptations for an impact assessment in Angola, which would be presented later in the session.

Mr Baldassarri also talked about an ongoing meta-study that looked at the effect of Entrepreneurship Education on individuals (students), on institutions, on the economy and society at large. In Norway, oral and writing skills had improved; unemployment among Entrepreneurship Education graduates was lower; and there was more steady employment. In Denmark, motivation to learn was increasing; students showed higher ambitions for their study career. Other than the impact on students, Entrepreneurship Education also had an impact on the institution and the staff. They became more motivated. In Wales, there was a higher level of start-ups since the introduction of Entrepreneurship Education and higher survival rate of start-ups opened by Entrepreneurship Education graduates. In the UK, companies created by graduates were more creative, innovative, ambitious and had a larger turnover.

Mr Luis Vaz, Founder and Vice President of the Portugal Entrepreneurship Education Platform gave a brief background of their involvement in the Angola ECP, for which they adapted the ASTEE framework to conduct an impact study for UNIDO. He recalled that entrepreneurship meant acting upon ideas and opportunities and transforming them into value for others. The value created could be financial, cultural or social. Entrepreneurship Education related to content, methods and activities supporting the creation and development of knowledge, competencies and experiences that made it desirable and feasible for students to initiate and participate in entrepreneurial value-creating processes.

Through research, five dimensions and six skill sets had been assessed. The five dimensions were entrepreneurial skills, knowledge, attitudes, connectedness to education and future career. The



Luis Vaz

six skills were creativity, planning, financial literacy, marshalling resources, managing uncertainty and teamwork. In the Angolan context, four dimensions were chosen: knowledge, skills, attitudes and intention. The tool used was a survey, which asked opinions of statements about entrepreneurship. It also had questions to assess the students' entrepreneurial knowledge. For entrepreneurial skills, managing uncertainty and marshalling resources were also assessed through questions. The same applied to entrepreneurial attitudes and entrepreneurial intentions.

Three provinces were considered in the study, one of which was the control group and did not undergo the ECP. Semi-structured interviews were conducted with teachers, directors and family members.

The programme had had a statistically significant impact on entrepreneurial knowledge and skills, but not on business creation. There was also a high impact and a difference compared to the control group regarding entrepreneurial attitudes, showing that the programme was not only useful for creating businesses. Another positive effect was on the students' self-evaluation and image. It helped the students' ability to maintain personal savings and increase knowledge of financial literacy. Almost 78% of the ECP group, compared with 36% of the control group, thought that school encouraged students to start their own business. Students and family members mentioned the increase in responsibility, participation in family tasks, and increased family savings capacity and income generation.

The school context had a significant influence on the results achieved by the programme, namely

the school board's support. The community context and the local business community were influential, although in a less pronounced way. One of the aspects that showed more fragility was the awareness and involvement of the local business community, particularly in terms of support for entrepreneurial initiatives.

Strengthening teachers' knowledge on teaching materials and methodologies contributed to changing their pedagogical practices. There was also more active student participation in the teaching-learning process and in school. Almost 85% of the teachers had already thought of applying their knowledge of entrepreneurship to boost their income; and 12.5% of teachers had already started their own business. Meanwhile, there was no negative effect on the classes (mathematics and Portuguese) where teaching hours were drawn from.

Ms Anabela Dinis, Assistant Professor of University of Beira Interior in Portugal introduced the study that she and her colleagues performed. The study intended to evaluate the impact of the ECP directed to teenaged students in Mozambique. Their concern was the short- and long-term impacts of Entrepreneurship Education. She briefed the participants concerning the process that the group went through in order to get the results. Thirty schools were selected from all provinces, representing 7% of all schools in Mozambique. The study, which was presented twice prior to this conference, involved quantitative and qualitative studies.

Ms Dinis proceeded with the results and pointed out the different impacts of Entrepreneurship Education on teenagers in the short and medium-long term. The ECP contributed to an increased perception of important entrepreneurship aspects, as well as to creating a real vision of entrepreneurship problems. Once outside the education system and given the need to find ways to support themselves and their families, graduates "activated" some entrepreneurial attitudes, intentions and behaviours and gained a greater perception of the importance and relevance of Entrepreneurship Education in comparison to students still attending ECP.

With regard to rural and urban distinctions, students from rural areas attending entrepreneurship programmes were more inclined to start their own businesses. There were significant differences in terms of entrepreneurial intention, psychological characteristics (locus of control, propensity to

risk, self-confidence and innovativeness) and perception of social acceptability (more scored by rural students).

ECP students of vocational schools in general presented higher entrepreneurial intentions and higher scores on entrepreneurial attitudes and behaviours. The proportion of ECP students in vocational schools that had already created a business and wanted to become entrepreneurs in the future was higher compared to those of general secondary schools.

In terms of gender, the ECP had a higher short-term impact on boys than girls, making more evident the differences in attitudes and behaviours. However, in graduate students, girls tended to present higher scores, especially concerning entrepreneurial intentions. Boys presented higher scores in innovativeness.

Overall, ECP seemed to have higher impacts in rural areas, and this difference might have been due to the prevailing living conditions in rural areas. Different kinds of schools presented different impacts, probably because there were students with different interests or teachers with different characteristics or methods. Ms Dinis pointed out some challenges too. Entrepreneurship Education mattered, but it was not enough to mitigate differences in gender attitudes and behaviours in the short term. In the medium–long term, it seemed to produce some effect. Impacts on girls seemed more related with necessity; but, on boys, with opportunity. ECP seemed more valued in rural areas; however, in these areas, the lower rate of business activities might have posed an additional difficulty to effective implementation.

Ms. Dinis also pointed to some limitations of the study that should be addressed in future work: the long-term perspective, inclusion of social impact statistics, entrepreneurial competencies in workplaces, databases for students and graduates, assessment of teacher knowledge and of effects of different methodologies.

The afternoon session was moderated by **Mr Frank Hennessey, Head of Business Studies for St. Mary's University College Belfast of the UK.**

Mr Hennessey briefly reviewed what had been discussed, and elaborated on the pros and cons of both transversal and content approaches. He noted that the problem with the transversal approach was that it was hard to track its coherence. Assessment was an important task.

Mr Johannes Lindner, Founder of the Initiative for Teaching Entrepreneurship and Centre for Entrepreneurship Education in Austria

began by speaking about Austria's TRIO-Model for Entrepreneurship Education. Level I was Entrepreneurial Core Education, which was what people understood most when talking about Entrepreneurship Education – at this level the students realized an idea and learned how to act on it. Level II is Entrepreneurial Culture, where there was encouragement of a culture of entrepreneurial thinking and acting more among young adults. Level III was Entrepreneurial Civic Education, where there was encouragement of a culture that promotes maturity, autonomy, personal responsibility and solidarity in order to create a dynamic civil society of citizens.

Mr Lindner discussed the three phases of development in Austria: first was the pilot phase, with several strategies; next was the analysis and reflection phase; and last was the implementation and sustainability phase. In Austria, 40 schools out of 500 had implemented entrepreneurship as a subject for two hours a week over three years. According to Mr Lindner, the pilot phase had a lot of research and experimentation with the involvement of all stakeholders, including parents. He pointed out that assessment was important, especially with younger students, because it determined whether students were able to create ideas.

After the TRIO-model, the next step was integrating milestones, especially in the new curriculum design in 2014. Mr Lindner called a student of his, **Ms Anne-Marie Keppler.** She spoke briefly about her



Johannes Lindner



Fernando Dolabela

experience in creating an idea in a business model. She had the chance to participate in the Austria 3000 competition in Vienna. Her idea was one of the best business models; it was an idea for a vending machine where you can create an individual t-shirt.

Mr Lindner explained that every student had to do a project in this three-year learning cycle, in teams of three, as part of their examinations. There was now a framework for references to entrepreneurship contained in nearly all curricula across the country – sometimes transversal, sometimes in a single subject. Those developing new syllabi also used this framework. A framework was also developed for the teachers' qualifications.

The Entrepreneurship Education School Certificate was created to bring teachers to a wider system. Another aim was to have at least one focus school in each federal state. Austria also collaborated with other countries to create the Entrepreneurship Challenge Program. For primary schools, workshops were created to show how ideas could run. Finally, Mr Lindner invited participants to the annual Entrepreneurship Summit and Entrepreneurship Summer School in Kitzbühel.

Mr Hennessey commended Mr Lindner and thanked him for allowing Ms Keppler to demonstrate the product of the programme. He then introduced **Professor Fernando Dolabela, Professor of the Dom Cabral Foundation in Brazil.**

Professor Dolabela was the creator and coordinator of the largest entrepreneurship teaching programme

in Brazil; author of 12 books; and founding member of the World Entrepreneurship Forum. He emphasized that people become entrepreneurs through networking and role models. He provoked the audience by stating that entrepreneurship could not be taught. Entrepreneurs did not fit into the hierarchical structure of schools and universities.

What should be done was to allow students to produce knowledge themselves, and therefore teachers needed to create the right environment. Education did not foster dreams; education tried to make everything uniform. Entrepreneurship was about one's own life; one could not separate it. He stated that one could not turn entrepreneurship into something academic or scientific, because then one would be killing entrepreneurship. Entrepreneurship happened in communities, not in schools, because it needed the complexity of the entire society.

Professor Dolabela, who worked independently without support by the government or private sector, stated that there were no entrepreneurial characteristics, and that it was a waste of time to try to evaluate it. An entrepreneur specialized in something that did not yet exist. Therefore, teachers could not help them; instead, they harmed them by interfering with their creativity. Entrepreneurship was a value like ethics. Entrepreneurs did not try to forecast the future; they shaped the future.

He highlighted that creativity, talent and passion were what entrepreneurship was about. Schools were not shaped for building networks. Entrepreneurship Education was more important in high schools than in university. There was a need to teach that being an entrepreneur was a value. There were classes in Brazil, but not in a standard form: entrepreneurs learned by exchange in groups of 10 people, which was a cheap process and easy to escalate.

Markets were the real assessor, Professor Dolabela emphasized – they said whether a business was doing well or not. Hierarchy and conformity in schools killed creativity. He expounded that what was needed was not Entrepreneurship Education, but simple tools, like a self-learning platform where everyone could create their own business plan. Being children of the industrial revolution was reflected in the education systems: emotions were kept from schools. He argued that to become an entrepreneur, one had to be emotional.

Lastly, he indicated that the industrial model asked: what do we know? Instead, we should ask: who am I?

Mr Hennessey then introduced **Mr Oscar Pino, Entrepreneurship Development Expert of UNIDO**. He helped introduce ECP successfully in several countries such as Mozambique and Cabo Verde.

Mr Pino started by giving examples of entrepreneurial competencies, how they interrelated with diverse life expectations of the individual, and how they could help shape career choices. He also pointed to the roles of entrepreneurs in society in making the lives of other people easier. Evaluations or assessments should not frustrate students, as this would keep them from following their path to fulfil their life expectations.

Mr Pino went on to present systemic elements that were necessary to introduce an ECP and ultimately develop entrepreneurial attitudes, such as developing an entrepreneurship curriculum and teacher training programmes for in-service and pre-service teachers; ensuring quality of teaching materials and pedagogy; establishing assessment regulations; continuously reviewing and renewing development monitoring and evaluation system indicators; and interacting with the community.

He related examples of ECP contents with observable impact. For example, the development and presentation of a business was less an end in itself, but served as a tool for assessing skills and competencies, e.g. how the student found a solution for a given problem, fluent communication, development of self-confidence, persistence, quality of work, critical analysis, problem solving and resource management. Once students embraced entrepreneurship, they could find solutions for their families and their community. The private sector



Oscar Pino

needed to take part in the assessment. Lastly, he presented assessment regulations and methods introduced in Mozambique.

The last panellist was **Ms Susanna Willemina Wannberg, Senior Education Officer of the National Institute of Education and Development in Namibia**.

Ms Wannberg stated that how entrepreneurship was assessed would determine how practically the teachers teach. The starting point of assessment was the syllabus, although there were certain skills that could not be assessed – for example, attitudes. Her talk focused on the formal assessment – those having formative (to assess teaching) and summative (marks sent to the parents at the end of the school year) purposes. Specifically, assessment objectives for Grades 8–10 included: (a) knowledge and understanding; (b) handling of analysis, processes and problem solving; and (c) practical, experimental and investigative skills and abilities. With Grade 8 students, there was more focus on knowledge. Gradually more problem solving and handling of information were added. In junior secondary levels, there was an external national junior exam.

Ms Wannberg elaborated a clear picture of the assessment process in the junior secondary level. In senior secondary, continuous assessment had a lower rating. The assessment objectives, although a little more complicated, were similar to those in junior secondary: (a) knowledge with understanding; (b) application; (c) investigation, analysis and evaluation; and (d) judgement and decision-making. She also gave a short description of the end-of-year examination, which had a combination of questions, paper writing and more case studies. After a year and a half, students submitted a portfolio, which was marked by the school and externally moderated by the school director of examinations.

Ms Wannberg ended with listing the tasks in the portfolio. Students did a creativity test and provided 10 examples of problem reversal. They did a motivated choice of an opportunity. They developed a business opportunity through feasibility study and research methods. They then provided a business plan and, lastly, got involved in or started a social entrepreneurship, initiative or business activity.

KEY THEMES OF THE SESSION

- The expectations of impact: individual, economic and societal effects.
- The contextual factors in school, community and business environments.
- School-based assessment of learners' outcomes.
- The effectiveness of teaching styles.
- The assessment of non-cognitive skills such as creativity, planning, managing uncertainty or teamwork.
- The need for longitudinal approaches that observe changes over time.
- The need for cross-sectoral collaboration for assessment.

WAY FORWARD

- Most assessment has focused on outcomes such as knowledge, skills, attitudes and new start-ups. More work is required on deep learning, motivation and engagement.
- The private sector needs to take part in assessment.
- There is a need for tracer studies to assess long-term outcomes for students and their communities.
- The data collected should inform public policy to improve the framework for Entrepreneurship Education.

SESSION PARTICIPANTS

Moderator:

- Adot Killmeyer-Oleche, Unit Chief, Quality Monitoring Unit, UNIDO
- Frank Hennessey, Head of Business Studies, St. Mary's University College Belfast, UK

Panellists:

- Anabela Dinis, Researcher, University of Beira Interior, Portugal
- Fernando Dolabela, Professor, Dom Cabral Foundation, Brazil
- Andrea-Rosalinde Hofer, Economist, Local Economic and Employment Development Programme, OECD
- Johannes Lindner, Founder, Initiative for Teaching Entrepreneurship and Center for Entrepreneurship Education, Austria
- Oscar Pino, Entrepreneurship Development Expert, UNIDO
- Luis Vaz, Founder and Vice President, Portugal Entrepreneurship Education Platform, University of Porto, Portugal
- Susanna Willemina Wannberg, National Institute for Educational Development, Namibia
- Simone Baldassarri, Policy Officer, DG Enterprise & Industry, European Commission

SESSION V: TOWARDS ENTREPRENEURIAL SOCIETIES



Summary of the Presentations

Mr Kazuki Kitaoka, Coordinator of the Strategic Planning and Coordination Unit of UNIDO was the moderator for the last session of the conference. He introduced the session by applying a historic view on the Millennium Development Goals. The Goals might have been too narrow, with entrepreneurship



Kazuki Kitaoka

opportunities, economic opportunities and social development opportunities missing.

After 17 months of consultations, the Sustainable Development Goals were proposed. These 17 goals were much more holistic, and in UNIDO's view they embraced the realities of development and the realities of challenges seen. Mr Kitaoka proposed a discussion on whether targets and indicators were actually the right ones from an entrepreneurial perspective, and which ones the audience wanted the global community to tackle within the next 15–20 years.

The first target was to promote an inclusive industrialization and foster innovation. This target focused on increasing access of small enterprises to value chains and markets, including access to information. The second target was an overall goal of economic growth, to reduce the amount of unemployed youth. The third target was to increase the number of youths and adults who have relevant skills for employment, decent jobs and entrepreneurship.

Mr Kitaoka also discussed four means of implementation. First was a clear mandate for capacity building, supporting national plans and programmes, and looking into national plans and

programmes for all these targets. Second was to look into policy and institutional coherence. Third was to look into multi-stakeholder partnerships and networks that would facilitate activities towards these Sustainable Development Goals. Fourth was having a data monitoring system in all countries.

The keynote speaker to share implications for the youth in Africa when societies are not entrepreneurial was **Mr Willem Naudé, Dean of Maastricht School of Management and Chair in Business and Entrepreneurship in Emerging Markets of Maastricht University School of Business and Economics in the Netherlands**. He reported on a research project based on a World Bank/Bill and Melinda Gates Foundation project, which looked at African agriculture. This research focused on whether or not we could currently talk about an entrepreneurial society. If not, what needed to be done? What were the implications for Entrepreneurship Education for youth of 15–24 years of age? To derive answers to these, Mr Naudé presented the Living Standards Measurement Study – Integrated Surveys of Agriculture data set, covering six countries and 40% of the African population.

In the study, Mr Naudé found that features of an entrepreneurial society were lacking. Other than households being less likely to have an enterprise, it was also found that rural households were less productive than urban households. Additionally, enterprises owned by the young were less productive. The usual business types generally needed a lot of experience, human capital and physical capital that young people have difficulties with. Moreover, low-productivity enterprises did not survive as long and did not grow fast. In the broader context, rural households were still focused on farming. Mr



Wim Naudé

Naudé presented more detailed information in his presentation. This was a problem because Africa was the youngest continent, with 170 million new labour market entrants projected to be searching for jobs in 2020. Rather than providing solutions, Mr Naudé posed guiding questions. How could one teach experiences in a faster time? What kind of education was needed – generalist or specialist? How should risks be managed? Could African youth afford to be entrepreneurial without social protection and micro-insurance?

Mr Naudé provided some policy recommendations for education and training. Given the numbers of potential (young) entrepreneurs in Africa, Mr Naudé suggested ensuring that they are exposed to opportunities. They could identify them and pursue them – then create and manage high-productivity enterprises. The potential impact might then be significant and the efficiency gains from better social protection could likewise be substantial.

On the topic of government and market failure, and one successful example, **Mr Kitaoka introduced Mr Rui Levy, the National Coordinator for UNIDO in Cabo Verde**. He presented the country's efforts to reform the business environment.

A favourable business environment was the key, Mr Levy claimed, and this had to be supported by the government, public administration and an effective justice system so that businesses could start rapidly. Furthermore, credit, clusters, knowledge, infrastructure and social protection would help investors and small businesses.

According to Mr Levy, Cabo Verde used the “change to compete” strategy. Principles of Total Quality Management were applied for better company registration and exports, notary identification and land registration. This and a non-bureaucratic but efficient public administration were essential to implement, to establish an entrepreneurial environment and an entrepreneurial ecosystem.

After a short break, the session resumed with **Mr Senseri Mtatiro, Consultant on Entrepreneurship Education for UNIDO in Kigali, Rwanda**, who summarized some food for thought by reviewing the recurring questions that had been asked.

What should the underlying policy be for Entrepreneurship Education curriculum development? From the discussions, Mr Mtatiro pointed out that no one size would fit all.

What should the nature of the curriculum be: stand-alone, integrated or mainstreamed, compulsory elective, spiral or modular for elementary or secondary schools, and higher education? He reflected that Entrepreneurship Education could actually be taken at different levels; it really depended on the priorities of the country.

How could practical education be ensured in view of teachers' bias for theoretical and teacher-centered approaches? Entrepreneurship Education being taught as a practical subject also depended on the nature of the syllabus, he reiterated.

Lastly, to what extent should technical support be provided? This was a common question addressed to UNIDO. Mr Mtatiro referred the participants with more questions to any of the project managers of UNIDO.

Next to speak was **Mr Joseph Tixier, Consultant for OECD**. He had conducted a small survey among the conference participants to get an overview of current practices and set expectations for knowledge exchange in future. He also drew parallels to the 360 knowledge platform presented earlier by OECD. The survey showed that the group was interested in statistical data regarding educational outputs, school-tailored information and case studies.

The means of knowledge exchange could be a dedicated online platform, webinars, e-mail and mailing lists. In addition, capacity building sessions could complement these to ensure local contextualization.



Billy Butamanya

Mr Kitaoka finally introduced **Mr Billy Butamanya, Entrepreneurship Curriculum Development Expert of UNIDO** to speak about the major steps that were necessary to develop and introduce an ECP.

In a consecutive manner, the first step was raising awareness of the potential of Entrepreneurship Education and introducing and explaining the idea to the Minister of Education and his or her staff, who in turn could then create a national interest and buy-in of the private sector and other partners.

The second step was conceptualization of entrepreneurship curricula, by understanding the concepts and implications, making important policy decisions and consulting potential stakeholders. These meetings should include discussions on: (a) the goals for Entrepreneurship Education; (b) the level of education in which it should be included; (c) expected learning outcomes; (d) the choice of stand-alone or integrated approach; (e) using spiral or modular curriculum; (f) time allocated to entrepreneurship curriculum; and (g) choosing elective or compulsory and the appropriate levels and school systems.

Mr Butamanya also pointed out that there were institutional aspects to be addressed: who should be the lead institution, who should partner to form working groups and what capacity-building methods were needed? A clear takeaway from this conference was establishing exchange between practitioners, ministers, teachers, students and national partners and developers, civil sector, private sector and stakeholders from other countries who had already implemented ECP and were willing to share their experience.

The next step was wording the syllabus, requiring agreement on terms such as entrepreneurial self-awareness and motivation, scanning the environment and identifying opportunities, and steering and managing a business. Included here were also the handling of business management functions, tasks and emerging issues such as gender, ICT, HIV/AIDS and environment. This process should be driven by the education authorities and highly responsive to the local context. Along with this, learning materials should also be developed. The role of technical assistance was to create the required capacities.

A piloting strategy then had to be decided on and an awareness campaigns started. This entailed bringing people on board and sensitizing schools, communities and the private sector. Training the pilot

teachers (in-service teachers) and linking in-service teaching to pre-service teaching was critical. During the pilot phase, the coaching and supervision of pilot teachers should be undertaken to ensure quality. The pilot phase had to be analysed using monitoring and supervision exercises. Based on the analysis of the pilot phase, adjustments should be undertaken and a rollout strategy developed. The latter had to consider the number of schools and the scope of the programme in the particular country, as well as the textbook policy and pre-service teacher training.

KEY THEMES OF THE SESSION

- The Sustainable Development Goals from an entrepreneurship perspective.
- The implications of un-entrepreneurial societies for youth in Africa.
- The business environment reform.
- The underlying policies, nature and support of entrepreneurship curriculum development.
- The knowledge exchange platform.
- The major steps in developing the entrepreneurship curriculum.

SESSION PARTICIPANTS

Moderator:

- Kazuki Kitaoka, Coordinator, Strategic Planning and Coordination Unit, UNIDO

Panellists:

- Rui Levy, National Coordinator, UNIDO, Cabo Verde
- Willem Naudé, Dean-Director of Maastricht School of Management, the Netherlands

WAY FORWARD

- There are many potential young entrepreneurs; they must be exposed to opportunities, and be able to connect with others to create new kinds of organizations and jobs.
- A favourable business environment is supported by public administration, the justice system, infrastructure, social protection, peace and stability.
- Introducing an ECP requires clear ownership and commitment by the relevant Ministry or Ministries, who then bring other stakeholders on board.
- Each curriculum, and policy for developing one, must be tailored to the needs of the country.
- The wording of the syllabus and agreement on the meanings of terms require consideration and discussion with stakeholders.
- Clear mandates are required for lead institutions, working group partners and capacity building.
- It is best to plan, implement and monitor a pilot phase before the rollout strategy is created.

CLOSING



Participants at the conference explored various facets of the role of education in promoting young people’s entrepreneurial competencies for their career development, for developing a vibrant private sector and for economic transformation. Salient points gathered during this three-day conference were as follows:

- There is a need for Entrepreneurship Education regardless of the challenges of economic development of the country. This underpinning need to create entrepreneurial societies and develop entrepreneurial youth seeks to increase employability of youth, create employment and encourage innovation for a more dynamic private sector and for sustainable development.
- There is a need for a wider concept on entrepreneurship. It is not just about putting up a business. It is providing the learning environment where the students acquire competencies (knowledge, skills and attitudes) for life. All these can be taught in the school setting through Entrepreneurship Education but need to be reinforced at home, within the community and in the environment of the student.
- Political will and commitment is required to introduce Entrepreneurship Education. All stakeholders (educators, parents, communities,

private sector and youth themselves) should be involved and contribute to the realization of this political will. It requires partnerships with all key actors to make it work. To be sustainable, Entrepreneurship Education should be embedded in the system and appropriate resources (human and financial resources) should be allocated by governments.

- Build them up early. Invest in young people to develop their entrepreneurial mind-set. These soft entrepreneurial skills can be developed and learned.
- The private sector plays a crucial role in Entrepreneurship Education. They can be engaged at all different levels of interventions such curriculum development, mentoring and apprenticeships as part of their corporate social responsibility but also to fill their business needs for a good workforce and economic partners for goods and services required by their enterprises.
- Entrepreneurship Education should focus on the student and his/her passion. The student is the key player in the whole process.
- There is no one model of entrepreneurship curricula that will fit all. Entrepreneurship Education should be applied in the context of the cultural, economic and social environment of the particular country.
- The educational system, through pre-service and in-service training, and teacher self-development are necessary in developing teachers’ abilities to bring out the entrepreneurial qualities and develop skills of youth.
- Entrepreneurship Education impact is qualitative and develops over time. Monitoring and evaluation systems are important to observe changes over time.
- There was a general consensus that a range of different metrics can be used to assess and validate entrepreneurial learning.
- There is a need for a conducive policy environment to support and encourage business start-ups among youth.
- Platforms are needed for the sharing of knowledge and experience, to advance and spread the ECP globally.

Participants decided to summarize the above points as the “Vienna conclusions” of the conference “Fostering Entrepreneurial Youth”.

ANNEX 1: CONFERENCE PROGRAMME

Tuesday, 11 November 2014

10:00 Official Opening Ceremony

- Welcome address and opening remarks by Taizo Nishikawa, Deputy to the Director General, UNIDO
- Opening Statement by His Excellency Mitsuru Kitano, Ambassador Extraordinary and Plenipotentiary of Japan to the International Organizations in Vienna
- Welcome remarks by Mr Mohamed-Lamine Dhaoui, Director of Business, Investment and Technology Services Branch, UNIDO

11:30 Keynote Speech

12:30 Lunch Break

Tuesday, 11 November 2014

14:30 SESSION I: Investing in future entrepreneurs

With a view to building entrepreneurial societies and developing entrepreneurial youth for the future, several countries have adopted a national policy to introduce entrepreneurship curricula in general, technical and vocational education and training. Using the existing networks of schools, the programmes reach out to rural and urban areas, to women as well as men. This first session will present selected experiences and place their relevance in the development context.

Moderator:

- Her Excellency Bente Angell-Hansen, Ambassador, Permanent Mission of Norway to UNIDO

Panellists:

- Diasala Jacinto André, National Programme Coordinator, National Institute for Research and Development of Education, Angola
- Constance Mbabazi Kateeba, Director, National Curriculum Development Centre, Uganda
- Senseri Mtatiro, Entrepreneurship expert, Rwanda
- Ivaldo Quincardete, National Director Secondary Education, Ministry of Education, Mozambique
- Patrick Simalumba, Deputy Director, National Institute for Educational Development, Namibia

16:00 Coffee break

Tuesday, 11 November 2014

16:30 SESSION I: Investing in future entrepreneurs

Moderator:

- Alain Fayolle, Professor, EM Lyon Business School, France

Panellists:

- Simone Baldassarri, Policy Officer, DG Enterprise and Industry, European Commission
- Hiroko Ueno, Senior Policy Analyst, Policy Research and Consulting Division, Mitsubishi UFJ Research and Consulting Co, Japan

18:00 Reception

Wednesday, 12 November 2014

09:00 **SESSION II: Private sector – a crucial partner?**

The private sector is a crucial partner for developing and implementing entrepreneurship curriculum programmes. It needs to be involved from the beginning in the design phase in order to define appropriate contents and methods. It takes part in teaching in the classroom and the workplace. The private sector is also a beneficiary. The session will specifically explore the competencies that businesses require from young people or for young people to become entrepreneurs. This second session will also identify the practice and potential of partnerships with the private sector at the local, national, regional and international levels.

Moderator:

- Friederike Soezen, Policy Expert, Department of Educational Policy, Austrian Federal Economic Chamber, Austria

Panellists:

- David Chakonta, Director General, Technical Education, Vocational and Entrepreneurship Training Authority, Zambia
- Junita Ciputra, Managing Director, Ciputra Group, Indonesia
- Cosmas Maduka, CEO, Coscharis Group, Nigeria
- Julius Mugisha, Graduate and young entrepreneur, Rwanda
- Takeru Ohe, Member of the Board of Cognex, Japan, and former Professor, Waseda University, Japan
- Selma Prodanovic, Entrepreneur, Business Angelina, Austria
- David Groenewald, Entrepreneurship Education Expert, Namibia
- Kiyotaka Morita, Manager, International Cooperation Bureau, Keidanren (Japan Business Federation)

12:30 **Lunch break**

Wednesday, 12 November 2014

14:30 **SESSION III: Teachers for entrepreneurship**

Fostering entrepreneurial attitudes in youth requires a learner-centred and action-oriented approach where the teacher is a facilitator for youth to develop the entrepreneurial competencies rather than a person to pass his or her knowledge to the student. How should teachers prepare themselves for this new role? How can the education system assist them? What challenges do teachers and education officers face? This session will focus on these questions and the training of teachers.

Moderator:

- Anthony A. Gribben, Head of Enterprise and Entrepreneurship, European Training Foundation, Ireland

Panellists:

- Colin Jones, Senior Lecturer, University of Tasmania, Australia
- João Litsuge, Head of the National Technical Working Group on Entrepreneurship, National Institute of Education Development, Mozambique
- Jaana Seikkula-Leino, Adjunct Professor, University of Turku, Finland

Thursday, 13 November 2014

09:00 **SESSION IV: Challenges in assessing learning outcomes**

Entrepreneurship competencies consist of a set of attitudes, skills and knowledge that vary depending on context conditions and the aim of a specific entrepreneurship curriculum programme. How can these entrepreneurship competencies be assessed? What contextual factors influence the acquisition and application of entrepreneurship competencies? How can

the impact be observed over the medium- and long-term? This session will explore various approaches to assessing learning outcomes.

Moderator:

- Adot Killmeyer-Oleche, Unit Chief, UNIDO

Panellists:

- Anabela Dinis, Researcher, University of Beira Interior, Portugal
- Andrea-Rosalinde Hofer, Economist, Local Economic and Employment Development Programme, OECD
- Luis Vaz, Founder and Vice President, Portugal Entrepreneurship Education Platform, University of Porto, Portugal

10:30 Coffee break

Thursday, 13 November 2014

11:00 SESSION IV: Challenges in assessing learning outcomes (continued)

Moderator:

- Frank Hennessey, Head of Business Studies, St. Mary's University College Belfast, UK

Panellists:

- Fernando Dolabela, Professor, Dom Cabral Foundation, Brazil
- Johannes Lindner, Founder, Initiative for Teaching Entrepreneurship and Center for Entrepreneurship Education, Austria
- Oscar Pino, Entrepreneurship Development Expert, UNIDO
- Susanna Willemina Wannberg, National Institute for Educational Development, Namibia

12:30 Lunch break

Thursday, 13 November 2014

14:30 SESSION V: Towards entrepreneurial societies

The final session will offer the participants an opportunity to exchange ideas, with a view to extracting lessons for entrepreneurship curriculum development and implementation. The issues covered will include the institutional arrangements and capacity-building requirements to sustain results, as well as the elements of a conducive environment for an entrepreneurship curriculum programme. The participants will explore ways to foster the knowledge exchange between countries and continents, and identify areas of further research and next steps.

Moderator:

- Kazuki Kitaoka, Coordinator, UNIDO

Speakers:

- Willem Naudé, Dean-Director of Maastricht School of Management, the Netherlands
- Rui Levy, National Coordinator for UNIDO, Cabo Verde

15:15 Coffee break

15:30 Discussion and outlook

17:00 Closing of the Conference

ANNEX 2: BIOGRAPHIES OF CONFERENCE SPEAKERS AND MODERATORS

KEYNOTE SPEAKER



Alain Fayolle, Professor, EM Lyon Business School, France

A professor of entrepreneurship, Alain Fayolle is the founder and Director of the Entrepreneurship Research Centre at EM Lyon Business School, France. He is engaged in research aimed at measuring the impact and learning outcomes of courses and education programmes in the field of entrepreneurship. Professor Alain Fayolle has authored twenty-five books and over one hundred articles in leading international and French-language journals. In 2013, he received the 2013 European Entrepreneurship Education Award and was elected officer of the Academy of Management Entrepreneurship Division.

SESSION I: INVESTING IN FUTURE ENTREPRENEURS

Moderator



Bente Angell-Hansen, Ambassador, Permanent Mission of Norway to UNIDO, Norway

H.E. Ms. Bente Angell-Hansen serves as Ambassador and the Permanent Representative of Norway to the United Nations (Vienna). Prior to this post, H.E. Ms. Bente Angell-Hansen served as Secretary General of the Norwegian Ministry of Foreign Affairs, Ambassador and Permanent Representative to the UN in Geneva, Norwegian Ambassador to Hungary and Director General at the Department of International Affairs in the Norwegian Office of the Prime Minister, amongst other distinguished posts. She holds a degree in Social Sciences from the University of Oslo.

Panelists



Fernanda Maria Brito Leitão Marques, Minister, Ministry of Education and Sports, Cabo Verde

Prior to her current post as Minister of Education and Sports of Cabo Verde, H.E. Ms. Fernanda Maria Brito Leitão Marques held the post of Minister of Higher Education and Culture. With an extensive background in the education sector, H.E. Ms. Fernanda Marques has assumed several high-level positions such as General Director of the Pedagogical Unit of Assessment and Cooperation at the Cabo Verde Pedagogical Institute and as Delegate of the Ministry of Education to Fogo Island, amongst others. She holds an MA in African Literatures and Cultures of Portuguese Expression from the University Nova of Lisbon and is a PhD candidate in Educational Sciences.



Diasala Jacinto André, National Programme Coordinator, National Institute for Research and Development of Education (INIDE), Angola

Diasala Jacinto André played an instrumental part in introducing entrepreneurship to Angola's education system through the Entrepreneurship Curriculum Programme (ECP). Mr. André has since worked with various actors, including UNIDO, UNDP and Chevron, in pursuit of further developing the entrepreneurship curriculum in the country. He has a BSc and MSc in Mathematical Physics from the University of Leipzig, Germany.



Constance Mbabazi Kateeba, Director, National Curriculum Development Centre, Uganda

During her nine-year tenure at the National Curriculum Development Centre (NCDC), Ms. Constance Mbabazi Kateeba spearheaded the use of local language as a medium of instruction for primary levels, as well as introduced a competence-based primary school curriculum. Ms. Kateeba was also instrumental in leading a fundamental shift in the country's education system in response to the issue of youth unemployment. Ms. Kateeba has been a steward of the Business, Technical and Vocational Education and Training (BTJET) strategic plan, entitled "Skilling Uganda", which denotes a paradigm shift for skills development in Uganda.



Joyce Musabe, Deputy Director-General, Rwanda Education Board, Rwanda

Joyce Musabe is Deputy Director General of the Rwanda Education Board in charge of the Curriculum and Pedagogical Materials Department. She previously held the post of Head of the Education Department at the Seventh Day Adventist Church. Ms. Joyce Musabe lectured at the education faculty of the Adventist University of Central Africa where she specialized in the philosophy of education and learning, as well as teaching methodology at undergraduate levels, and administration at masters level. She holds a PhD in Curriculum and Instruction and an MA in Religious Education from the Adventist International Institute of Advanced Studies, Philippines.



Ivaldo Quincardete, National Director, National Directorate of Secondary Education, Mozambique

Ivaldo Quincardete is currently the National Director of Secondary Education in Mozambique. He has a long and varied career in education, serving as Professor and Director for various secondary schools. He has also been a member of the National Examination Commission. Mr. Quincardete holds a degree in Biology from the University Eduardo Mondlane, Mozambique.



Patrick Simalumba, Deputy Director, National Institute for Educational Development, Namibia

Patrick Simalumba is a Deputy Director for Curriculum Research and Development at the National Institute for Educational Development (NIED), a directorate of the Ministry of Education. He is currently spearheading the coordination of the development and revision of national curriculum policy documents, school curricula and syllabi, teachers' guides and training manuals, as well as carrying out research and conducting in-service teacher training for curriculum and syllabi revisions. He holds an MA of Education from the University of South Africa.



Simone Baldassarri, Policy Officer, DG Enterprise and Industry, European Commission

Simone Baldassarri is responsible for Education for Entrepreneurship in the Directorate General for Enterprise and Industry of the European Commission. In this post, he is responsible for communication on “Fostering entrepreneurial mindsets through education and learning” and for the “Oslo Agenda for Entrepreneurship Education in Europe”. He was in charge of working groups at the European level on “Entrepreneurship in Higher Education” and on “Entrepreneurship in Vocational Education and Training”. He joined the European Commission in May 1999. He previously worked in the private sector, providing consultancy services for enterprises. He holds an Economics degree from the University La Sapienza in Rome, Italy.



Hiroko Ueno, Senior Policy Analyst, Policy Research and Consulting Division, Mitsubishi UFJ Research and Consulting Co., Japan

Ms. Hiroko Ueno is a Senior Policy Analyst from the Policy Research and Consulting Division at Mitsubishi UFJ Research and Consulting Co., Ltd., a leading think tank in Japan. She conducts research and makes policy recommendations for the government, governmental organizations and public associations mainly in the field of industrial development, science and technology, intellectual property and entrepreneurship education. She supported the Japanese government in its beginning stage of entrepreneurship education by conducting a benchmark study of several countries, developing a model programme and guidebook for teachers to start entrepreneurship education, and helping the government in the promotion of entrepreneurship education.

SESSION II: PRIVATE SECTOR – A CRUCIAL PARTNER

Moderator



Friederike Soezen, Policy Expert, Department of Educational Policy, Austrian Federal Economic Chamber

Friederike Soezen has been working with the Austrian Federal Economic Chamber's (WKO) Educational Policy Department in Vienna since 2008. Before joining the WKO, she worked at the Burgenland Chamber of Commerce for 18 years. As part of her work, Ms. Soezen directed careers' counselling and guidance services. Ms. Soezen has served as a representative of the European Association of Craft, Small and Medium-sized Enterprises (UEAPME), on a number of EU-sponsored working groups on entrepreneurship education and, more recently, she participated as an expert in Entrepreneurship360, a joint project of the OECD and the European Commission, as well as served as an Advisory Board Member of the ETF Entrepreneurial Communities Initiative. She holds a PhD in Psychology from the University of Vienna.

Panelists



Víctor Arias, International Manager, Tknika Centre for Innovation in Vocational Training, Spain

Victor Arias is the International Manager at Tknika, Centre for Innovation in Vocational Training (VET), Spain, responsible for the promotion of entrepreneurship in VET education. He is in charge of identifying good practices in Europe and assessing their transferability to the Basque region of Spain. As part of his current duties, he disseminates initiatives and good practices of the Basque region and collaborates with other European institutions in the Edison Project, which aims to elaborate online courses for trainers of entrepreneurship.



Junita Ciputra, Managing Director, Ciputra Group, Indonesia

Junita Ciputra is the Managing Director of Ciputra Group, one of the leading diversified property developers in Indonesia, which specializes in large-scale integrated development projects. She currently holds several leadership positions with publicly listed companies. Ms. Ciputra is currently a committee member on the Ciputra Entrepreneur Foundation, a foundation engaged in entrepreneurship education in schools and universities in Jakarta and Surabaya, Indonesia. She has a MBA degree in Finance and Real Estate from the University of Southern California.



David Chakonta, Director General, Technical Education, Vocational and Entrepreneurship Training Authority (TEVETA), Zambia

David Chakonta is the Director General and CEO of the Technical Education, Vocational and Entrepreneurship Training Authority (TEVETA), Zambia. He has over twenty-five years of experience in the technical and vocational education and training (TVET) sector. Prior to his current post, he held the position of Director of Development, a portfolio that included the development of all Technical Education, Vocational and Entrepreneurship Training (TEVET) national curricula. Mr. Chakonta holds a Master of Engineering from the University of Nottingham, UK, and a Diploma in Technical Teaching from the University of Zambia.



David Groenewald, Entrepreneurship Education Expert, Namibia

David Groenewald retired from his post of Senior Education Officer at the end of September 2014. In addition to his teaching duties, Mr. Groenewald was also responsible for curriculum development and research at the National Institute for Educational Development (NIED) and spearheaded the planning, development and implementation of entrepreneurship curriculum in Namibia. He has extensive experience as a trainer in instructional leadership, teacher training and the development of teaching materials. Mr. Groenewald has a degree from the University of South Africa.



Cosmas Maduka, President and CEO, Coscharis Group, Nigeria

Cosmas Maduka is the founder, President and Chairman of the Board of Directors of the Coscharis Group and is one of the leading Chief Executive Officers in Nigeria. He has also been a member of the Electric Power Reform Implementation Committee in Nigeria and is currently a member of the Nigerian Foundation for Support of Victims of Terrorism. He served as a Director in the Access Bank PLC for 12 years. He is highly involved in youth empowerment in Nigeria, often speaking on challenges related to youth and entrepreneurship. Mr. Maduka is an Alumni of Harvard Business School (Executive Programme).



Kiyotaka Morita, Manager, International Cooperation Bureau, Keidanren (Japan Business Federation)

Since joining Keidanren (Japan Business Federation) in 1997, Kiyotaka Morita has been in charge of international trade, economic cooperation, industrial policy and environmental issues. He served as an Advisor to the Permanent Mission of Japan in Geneva from 2001 to 2003, in charge of the WTO Negotiations on Trade in Services. From 2007-2009, he was responsible for the Climate Change Negotiations under the UNFCCC. He has also been working on economic cooperation, infrastructure development, trade policies (e.g. Japan-China-Korea Free Trade Agreement and Bilateral Economic Partnership Agreements) and regional issues (Asia, Africa and Latin America). He holds a BA and MA in International Law from Hitotsubashi University, Tokyo.



Julius Mugisha, General operations managers and Owner, Serve and Smile, Rwanda

Julius Mugisha is currently the General Operations Manager at Serve and Smile and a Managing Director at Light Transforming Ltd. He also served as coordinator at the African Youth Leadership Forum (AYLF) at the University of Rwanda, College of Education and was previously an Operations Manager for EzyLife Ltd. and a Marketing Manager for the Rana Company. Mr. Mugisha graduated from the University of Rwanda's College of Education in 2014.



Takeru Ohe, Advisor, Waseda University, Tokyo, Japan

Takeru Ohe has extensive experience as a consultant and teacher fostering entrepreneurial youth and companies. He co-authored Entrepreneurship Education Will Change Kid and started the Waseda Venture Kids programme in 1998. He also developed the Consulting Based Learning method in which MBA students used their knowledge to help local small and medium sized enterprises. Since 2008, Mr. Ohe has been organizing Business Model Competitions in Cambodia and Japan. He holds a PhD in Experimental Physics from the University of Maryland and an MBA from the Columbia University Graduate School of Business.



Selma Prodanovic, Founder and CEO, Brainswork GmbH, Austria

Selma Prodanovic is an entrepreneur and philanthropist. She has supported over 300 startups, founded the influential business developer Brainswork, and co-founded the Austrian Angel Investors Association. She is on the board of several educational organizations and has received numerous awards such as the 100 World of Difference Award 2013 awarded by The International Alliance for Women in Washington and the Veuve Clicquot Business Woman Award 2014. Ms. Prodanovic holds degrees from the University of Sarajevo, Saint-Louis University in Madrid and the Vienna University of Economics and Business Administration.



Maria Strommer, Human Resources Manager, Human Resources and Organization Development, Zeta, Biopharma GmbH, Austria

Maria Strommer is currently the Human Resource Manager at Zeta Biopharma GmbH. Ms. Strommer has over ten years of project management experience at the Styrian Association for Education and Economy. She also has extensive experience teaching young people about entrepreneurship, including innovation, creativity and starting your own business, within programmes of the JA-YE (Junior Achievement Young Enterprise Europe).



Zenebe Tesfaye, Managing Director, Selam Children's Village, Ethiopia

Zenebe Tesfaye is currently the Managing Director of the Selam Children's Village in Ethiopia, a NGO that provides support to hundreds of orphaned and deprived community members. Selam Children's Village operates educational institutes where more than 3,000 children receive formal education, as well as technical and vocational training schools, where young girls and boys develop technical- and vocational-based skills. Mr. Tesfaye was previously National Director for SOS Children's Village-Ethiopia.

SESSION III: TEACHERS FOR ENTREPRENEURSHIP

Moderator



Anthony A. Gribben, Head of Enterprise and Entrepreneurship, European Training Foundation (ETF), Italy

Anthony A. Gribben is a senior expert with the European Training Foundation (ETF), EU's specialized agency for promoting workforce development in neighboring non-member countries. He has over thirty years of experience in education, training and labour market reform at both policy and delivery level, twenty of which have been spent working within transition, middle-income and post-conflict economies. Mr. Gribben has been a policy advisor to the European Commission and OECD on entrepreneurship education since 2004. He spearheaded the development of policy indicators in the area of entrepreneurship education and enterprise skills in the Western Balkans, Eastern Europe, North Africa and the Middle East.

Panelists



Colin Jones, Senior Lecturer, University of Tasmania, Australia

Colin Jones is a senior lecturer of entrepreneurship at the University of Tasmania, Australia, and a visiting professor of entrepreneurship at the University of Wales, Trinity Saint David, United Kingdom. He has published more than 80 articles and two books on entrepreneurship-related topics and been recognized internationally for his research, teaching and learning achievements. Mr. Jones has been regularly invited by the United Nations, the World Entrepreneurship Forum and many international universities to discuss the development of entrepreneurial learning. Mr. Jones holds a PhD in Entrepreneurship from the University of Tasmania, Australia.



João Litsuge, Head of the National Technical Working Group on Entrepreneurship, National Institute of Education Development (INDE), Mozambique

In his post as Technical Coordinator of the National Working Group (NTWG) at the National Institute of Education Development (INDE), Mr. João Litsuge is responsible for coordinating all activities related to the introduction of entrepreneurship, including the development, training, implementation and monitoring of the curriculum. Prior to this post, he taught mathematics at the primary and secondary levels and held multiple posts at the Ministry of Education, including at the National Directorate for Basic Education, Department of Information Technologies and Communication and National Council for Examinations.



Jaana Seikkula-Leino, Adjunct Professor, University of Turku, Finland

Ms. Jaana Seikkula-Leino works as an adjunct professor at the University of Turku, Department of Teacher Education in Rauma. Her research interests include entrepreneurship education, enterprising processes, curriculum reform, evaluations, entrepreneurial culture and teacher education. She has more than 120 publications. From 2010 to 2014 she was responsible for the YVI project, which aimed to enhance entrepreneurship education for Finnish teachers. Ms. Seikkula-Leino is also an entrepreneur and holds a PhD in Education from the University of Turku, Finland.

SESSION IV: CHALLENGES IN ASSESSING LEARNING OUTCOMES

Moderator



Adot Killmeyer-Oleche, Unit Chief, Quality Monitoring Unit, United Nations Industrial Development Organization (UNIDO)

As the current head of the Quality Monitoring Unit, Ms. Killmeyer-Oleche is responsible for ensuring the effective results monitoring of UNIDO's industrial development activities. She has extensive experience at UNIDO, serving as the Programme Officer responsible for francophone African countries (between 1998 and 2006). Until July 2014, she served as the Chief of the Quality Assurance Unit, managing the appraisal and approval of UNIDO's technical cooperation projects. Her long-standing commitment to youth unemployment, gender and development has been a constant theme throughout her career.

Panelists



Anabela Dinis, Assistant Professor, University of Beira Interior, Portugal

Ms. Anabela Dinis has an extensive academic background in the field of entrepreneurship. Her main areas of research are entrepreneurship and its relation with regional and rural development, social entrepreneurship, and entrepreneurship education. Her post-graduate work has focused on the theme of creation and development of small enterprises. Ms. Dinis has published in several international journals and has been a speaker at several national and international conferences. She holds a PhD in Management from the University of Barcelona, Spain and Växjö University, Sweden.



Andrea-Rosalinde Hofer, Economist, Local Economic and Employment Development Programme, Organisation for Economic Co-operation and Development (OECD)

Ms. Andrea-Rosalinde Hofer is currently based at the Trento Centre for Local Development where she leads the work in the OECD on the EU-OECD Guiding Frameworks for Promoting the Entrepreneurial University in Europe (HEInnovate); and Entrepreneurship360 - promoting entrepreneurial learning in schools and vocational education and training. Ms. Hofer is a member of the advisory boards of CONEEECT and ASTEE (EU-CIP 2012 programme), and of the advisory council of the EXIST programme, a German government initiative to enhance academic entrepreneurship. She holds an MSc degree in Agricultural Economics and Engineering, a MA in Political Science and is a PhD candidate at the University of Trento, Italy.



Ricardo Gouveia Rodrigues, Assistant Professor, University of Beira Interior, Portugal

Mr. Ricardo Gouveia Rodrigues teaches marketing research, entrepreneurial marketing, creativity and data analysis to undergraduate, master and doctoral students at the University of Beira Interior, Portugal. He is also a researcher at the Research Centre on Enterprise Science (NECE-UBI). His main research interests are entrepreneurial marketing and entrepreneurship education, but also studying the impact of marketing efforts on themes such as physical activity, children behaviour and happiness. Mr. Rodrigues has published numerous papers, books and book chapters, and he is an editor and reviewer in several international journals. He holds a PhD in Business from the University of Beira Interior, Portugal.



Luis Vaz, Founder and Vice President, Portugal Entrepreneurship Education Platform (PEEP)

As founder and Vice President of the Portugal Entrepreneurship Education Platform (PEEP), Mr. Luís Vaz supervises several programmes funded by the European Commission and European Economic Area (EEA) Grants, related to entrepreneurship education, female entrepreneurship, the green economy, as well as an impact study of entrepreneurship curricula for the United Nations. Mr. Vaz has more than 20 years of experience in finance management in international organizations. He holds a degree in Business Administration and Management from the University Institute of Lisbon (ISCTE).



Frank Hennessey, Head of Business Studies, St. Mary's University College Belfast, United Kingdom

Frank Hennessey has over 25 years of experience in entrepreneurial education within teacher education. Mr. Hennessey was the UK Government nominee on the EU Commission's Thematic Working Group for Entrepreneurship Education. He worked as a Technical Advisor with the South Eastern European Centre for Entrepreneurial Learning, revising the Training and Good Practice Policy Indicators for Women Entrepreneurs. Mr. Hennessey also worked with the Austrian Federal Economic Chamber, on the development of the Entrepreneurial Skills Pass and recently participated in the European Forum, Alpbach Economic Symposium.



Fernando Dolabela, Professor, Dom Cabral Foundation, Brazil

Professor Fernando Dolabela is the creator and coordinator of the largest teaching entrepreneurship programmes in Brazil. His methodologies link entrepreneurship with wealth creation and social justice. He has served as a consultant to educational institutions throughout Brazil. A national and international speaker, Professor Dolabela has authored 12 books, including the bestselling *The Secret Luisa*. He is a founding member of the World Entrepreneurship Forum and of the Red EmpreendeSur, Innovation and Entrepreneurship in Latin America.



Johannes Lindner, Founder, Initiative for Teaching Entrepreneurship and Center for Entrepreneurship Education, Austria

The first winner of the Ashoka Fellow Award on behalf of Austria, Mr. Lindner teaches entrepreneurship and economics at the Schumpeter Business School and is head of the department of Entrepreneurship Education at the University College of Teacher Education Vienna/Krems (KPH). He is also the Austrian representative at the Working group on Transversal Skills (and entrepreneurship education) at the Directorate General for Education and Culture of the European Commission. Mr. Lindner is the editor and author of various educational materials and articles on the theme of Entrepreneurship Education and Business Teaching, a subject he is also an adjunct lecturer of at the University of Vienna.



Oscar Pino, Entrepreneurship Development Expert, United Nations Industrial Development Organization (UNIDO)

Mr. Pino has extensive experience with UNIDO, for over 20 years, in the field of entrepreneurship development. He helped develop the Entrepreneurship Curriculum Programme (ECP) for Mozambique, in addition to supporting the Governments of Angola and Cape Verde in introducing the ECP in their respective educational systems. Prior to joining UNIDO, Mr. Pino taught at the Industrial Institute in Maputo, Mozambique. He has also worked as a technical adviser to the Government of Mozambique to revise regulations to facilitate the acquisition of business licenses and the establishment of a one-stop-shop for private sector development.



Susanna Willemien Wannberg, Senior Education Officer, National Institute for Educational Development, Namibia

In her role as Chief Education Officer at the National Institute for Educational Development (NIED) in Namibia, Ms. Willemien Wannberg has been responsible for the curriculum development of entrepreneurship, accounting and business studies. She also supervises curriculum development for other commercial, arts, computer, technical and home sciences subjects. Ms. Wannberg was previously a teacher and advisory teacher in commercial subjects.

SESSION V: TOWARDS ENTREPRENEURIAL SOCIETIES

Moderator



Kazuki Kitaoka, Unit Chief, Strategic Planning and Coordination Unit, United Nations Industrial Development Organization (UNIDO)

Kazuki Kitaoka is Head of the Strategic Planning and Coordination Unit at the United Nations Industrial Development Organization (UNIDO) and currently manages the global consultations of the UN Development Group on Engagement with the Private Sector, as part of the multi-stakeholder dialogue towards the post-2015 development agenda, as well as UNIDO's global Networks for Prosperity initiative. He joined the organization in 2003 for the implementation of private sector development, industrial technology and corporate responsibility programmes. In his subsequent roles as strategic planner, programme manager and head of donor relations, he worked on organizational policies and publications related to sustainability, growth, poverty reduction, gender equality, development effectiveness, the changing role of middle-income countries in globalization, and the global development and aid architecture. Previous to UNIDO, Mr. Kitaoka worked at UBS Financial Services in Zurich and Tokyo.

Panelists



Senseri Mtatiro, National Consultant on Entrepreneurship Education, UNIDO, Kigali, Rwanda

Mtatiro Senseri is responsible for entrepreneurship development and implementation at UNIDO, Kigali. He facilitated the introduction and implementation of entrepreneurship education with national curriculum authorities in Rwanda and Tanzania. Before joining UNIDO in 2011, he was a Curriculum Specialist for Entrepreneurship Education and Accounting courses at the Rwanda Education Board (REB) and later at the Workforce Development Authority (WDA), an institution in charge of technical vocational education and training (TVET) in Rwanda. Mr. Mtatiro was also a consultant on entrepreneurship education for the Rwandan Ministry of Trade and Industry in SME development, as well as for the Ministry of Education and Vocation Training of Tanzania.



Billy Butamanya, International Consultant on Entrepreneurship Curriculum Development, UNIDO, Uganda

Billy Butamanya has been with UNIDO since 2005 as an International Consultant and as a National Expert on Entrepreneurship Curriculum Development. Prior to his work with UNIDO, he worked with the Ministry of Finance and the UNDP Private Sector Development Programme as a Programme Coordinator. He has also worked for a regional trade and development bank and the Treasury Department of the Government of Uganda. Mr. Butamanya has been instrumental in the development and implementation of entrepreneurship curriculum in many African countries. He holds Master's degree in Development Finance.



Wim Naudé, Dean of Maastricht School of Management and Chair in Business and Entrepreneurship in Emerging Markets, Maastricht University School of Business and Economics

Wim Naudé is the Dean of the Maastricht School of Management, and holds the Chair in Business and Entrepreneurship in Emerging Markets at the Maastricht University School of Business and Economics. He is also a Research Fellow at the Institute for the Study of Labor (IZA) in Bonn. Previously, he was a Professorial Fellow at UNU-MERIT in Maastricht, Senior Research Fellow at UNU-WIDER in Helsinki, Research Director at North-West University in South Africa and Research Officer and lecturer at the University of Oxford, United Kingdom.

ANNEX 3: ALPHABETICAL LIST OF CONFERENCE PARTICIPANTS

#	MR/MS	LAST NAME	FIRST NAME	COUNTRY	TITLE	ORGANIZATION
1	Mr	Wazeen	Fazlul Hadi	Afghanistan	Senior Advisor	Department for Curriculum Development, Ministry of Education
2	Mr	Chemakh	Amar	Algeria	Alternate to the Permanent Representative to UNIDO	Permanent Mission of Algeria in Vienna
3	Mr	Andre	Diasala	Angola	National Programme Coordinator	National Institute for Research and Development of Education, Ministry of Education
4	Mr	Fernandes	Pedro	Angola	Coordinator for Teacher Training	National Institute for Research and Development of Education, Ministry of Education
5	Mr	Ferreira	Maria de Jesus	Angola	Ambassador	Permanent Mission of the Republic of Angola
6	Ms	Hawala	Nydia	Angola	Economic Development Analyst	Southern Africa Strategic Business Unit, Cabinda Gulf Oil Company Limited
7	Ms	Neto	Elisabete M Dos R De C DA Costa	Angola	Teacher	Ministry of Education
8	Mr	Sebastiao	Bento Lazaro das Dores	Angola	First Secretary	Permanent Mission of the Republic of Angola
9	Mr	Stepanyan	Robert	Armenia	Head	Development Programs and Monitoring Department
10	Mr	Jones	Colin	Australia	Senior Lecturer on Entrepreneurship	University of Tasmania
11	Mr	Lindner	Johannes	Austria	Founder	Initiative for Teaching Entrepreneurship and Centre for Entrepreneurship Education
12	Mr	Prodanovic	Selma	Austria	Founder and CEO	Brainswork GmbH
13	Ms	Soezen	Friederike	Austria	Policy Expert	Department of Educational Policy, Austrian Federal Economic Chamber
14	Ms	Strommer	Maria	Austria	Human Resource Manager	Zeta Biopharma GmbH
15	Ms	Teply	Annamaria	Austria	Student	Handelsakademie
16	Ms	Dorji	Kesang Choden	Bhutan	Director	Department for Curriculum and Research Development, Ministry of Education
17	Mr	Dolabela Chagas	Fernando Celso	Brazil	Professor	Dom Cabral Foundation

#	MR/MS	LAST NAME	FIRST NAME	COUNTRY	TITLE	ORGANIZATION
18	Mr	Traore	Idrissa	Burkina Faso	Directeur de La Promotion de L'Insertion Socio-économique et de l'Autonomisation des Jeunes	Ministère de la Jeunesse, de la Formation Professionnelle et de l'Emploi
19	Mr	Ndayiragije	Cassilde	Burundi	Main Facilitator Entrepreneurship in Basic Education	Ministry of Education
20	Ms	Her Excellency Brito Leitão Marques	Fernanda Maria	Cabo Verde	Minister of Education	Ministry of Education and Sports
21	Mr	Levy	Rui	Cabo Verde	National Consultant	UNIDO Praia, Cabo Verde
22	Mr	Mendes Monteiro Borges	Samira	Cabo Verde	Technician	Ministry of Education
23	Ms	Silva Santos	Margarida Maria	Cabo Verde	National Director of Education	Ministry of Education and Sports
24	Mr	Chouen	Tauch	Cambodia	Director General for Youth	Ministry of Education, Youth and Sports
25	Ms	Peng	Lakhena	Cambodia	Lecturer	National Technical Training Institute
26	Mr	Sok	Narin	Cambodia	Head of UNIDO Operations	UNIDO Phnom Penh, Cambodia
27	Mr	Yok	Sothy	Cambodia	President	National Technical Training Institute
28	Ms	Avila Becerril	Ana	Costa Rica	Minister Counsellor and Alternate Representative	Embassy and Permanent Mission of Costa Rica in Vienna
29	Ms	Castro	Alessandra	Costa Rica	Intern	Embassy and Permanent Mission of Costa Rica in Vienna
30	Mr	Espinoza Solano	Herbert	Costa Rica	Minister Counsellor and Alternate Representative	Embassy and Permanent Mission of Costa Rica in Vienna
31	Ms	Pilgerstorfer	Kimberly	Costa Rica	Intern	Embassy and Permanent Mission of Costa Rica in Vienna
32	Ms	Urena	Manuela	Costa Rica	Minister Counsellor and Alternate Representative	Embassy and Permanent Mission of Costa Rica in Vienna
33	Mr	Dogoh	Franck Auguste Ange Madou	Côte d'Ivoire	Special Advisor to Minister of State in Charge of Employment	Ministry of State, Employment, Social Affairs
34	Mr	Fofie	Koffi	Côte d'Ivoire	Director Formal Education	Ministry of Foreign Affairs
35	Mr	Ouattara	Largaton Gilbert	Côte d'Ivoire	Permanent Representative	Permanent Mission
36	Mr	Yao	Edi Jean-Paul	Côte d'Ivoire	Counsellor	Permanent Mission
37	Mr	Pino	Oscar	Cuba	Entrepreneurship Development Expert	UNIDO Nampula, Mozambique

#	MR/MS	LAST NAME	FIRST NAME	COUNTRY	TITLE	ORGANIZATION
38	Ms	Kanyanga	Odette	Democratic Republic of Congo	Directeur Generale	National Fund for the Promotion of Women and Protection of Children
39	Mr	Tshinga Ahuka	Paul-Emile	Democratic Republic of Congo	Permanent Representative	Democratic Republic of Congo Permanent Mission to UNIDO
40	Mr	Rodriguez	Ivan Dario	Ecuador	Advisor	Ministry of Education
41	Mr	Adnew	Zenebe Tesfaye	Ethiopia	Managing Director	Selam Children's Village
42	Ms	Seikkula-Leino	Jaana Marjut	Finland	Adjunct Professor	University of Turku
43	Mr	Fayolle	Alain	France	Professor	EM Lyon Business School
44	Mr	Tixier	Joseph Luc Jean	France	Consultant	OECD
45	Ms	Hofer	Andrea-Rosalinde	Germany	Economist	OECD
46	Mr	Ablakwa	Samuel Okudzeto	Ghana	Deputy Minister	Ministry of Education
47	Mr	Deh	Sebastian	Ghana	Executive Director	Council for Technical & Vocational Education & Training
48	Mr	Arifin	Suadipradja	Indonesia	Head	Division of Industrial Human Resource Development
49	Ms	Ciputra	Junita	Indonesia	Managing Director	Ciputra Group
50	Mr	Tanan	Herwandi Antonius	Indonesia	Managing Director of Ciputra Group	Ciputra Group
51	Ms	Salehi-ravesh	Leila	Iran	International Project Coordinator	UNIDO Programme Office Amman, Jordan
52	Mr	Mohammedmurad	Dyar	Iraq	Attaché	Embassy of the Republic of Iraq, Vienna
53	Mr	Gribben	Anthony Alphonsus	Ireland	Head of Enterprise and Entrepreneurship	European Training Foundation
54	Mr	Baldassarri	Simone	Italy	Policy Officer	DG European Commission
55	Mr	His Excellency Kitano	Mitsuru	Japan	Ambassador	International organizations, Vienna
56	Mr	Kitaoka	Kazuki	Japan	Coordinator	UNIDO
57	Mr	Morita	Kiyotaka	Japan	Manager	Keidanren
58	Mr	Ohe	Takeru	Japan	Advisor	Waseda University
59	Ms	Ueno	Hiroko	Japan	Senior Policy Analyst	Mitsubishi UFJ Research and Consulting Co
60	Mr	Gitonga	S.M.	Kenya	Ambassador	Permanent Mission of Kenya
61	Mr	Guyo	Wario Kuduba	Kenya	Second Secretary	Permanent Mission of Kenya
62	Ms	Killmeyer-Oleche	Adot	Kenya	Unit Chief	UNIDO

#	MR/MS	LAST NAME	FIRST NAME	COUNTRY	TITLE	ORGANIZATION
63	Mr	Chantha- phone	Siamphone	Lao PDR	Director	Lao–India Entrepreneurship Development Center
64	Mr	Leuang	Vannalek	Lao PDR	Deputy Director General	Department of Technical and Vocational Education
65	Mr	Raddoura	Salim	Lebanon	Counsellor	Permanent Mission of Lebanon in Vienna
66	Mr	Mohlomi	Nthoesele Edwin	Lesotho	Curriculum Specialist	National Curriculum Development Centre
67	Mr	Michel Sabir Michael	Ratovonasy	Madagascar	Inspector of Cabinet	Department of Employment and Technical Education
68	Ms	Alimaa	Tuya	Mongolia	Head	Ministry of Education and Science
69	Mr	Badamd- amdin	Battuvshin	Mongolia	Director	Small and Medium Enterprises Development Fund, Ministry of Labour
70	Ms	Badamt- setseg	Altangerel	Mongolia	Director	Lab High School of Young Technicians
71	Ms	Namsraidorj	Batchimeg	Mongolia	Consultant	School of Business, National University of Mongolia
72	Mr	Purevdorj	Gantulga	Mongolia	State Secretariat	Ministry of Labour
73	Mr	Belqasmi	Youssef	Morocco	Secrétaire Général du Ministre	Ministry of Education
74	Mr	Litsuge	João Francisco	Mozambique	Head of the National Technical Working Group	National Institute of Education Development
75	Mr	Quincardete	Ivaldo Henriques De Azevedo	Mozambique	National Director	National Directorate of Secondary Education, Ministry of Education
76	Mr	Groenewald	William David	Namibia	Entrepreneurship Education Expert	(retired) Ministry of Education
77	Mr	Simalumba	Patrick	Namibia	Deputy Director	National Institute for Educational Development, Ministry of Education
78	Mr	van Wyk	Ferrand	Namibia	Project Coordinator	National Institute for Educational Development, Ministry of Education
79	Ms	Wannberg	Susanna Willemina	Namibia	Senior Education Officer	National Institute for Educational Development, Ministry of Education
80	Mr	Awasthi	Lava	Nepal	Director General	Ministry of Education
81	Mr	Pandit	Bishwa	Nepal	State Secretary	Ministry of Education
82	Mr	Ranabhat	Baburam	Nepal	Consultant	UNIDO
83	Mr	Barsisa	Kennedy Zaro	Nigeria	Principal Programme Officer Youth Employment and Sports	Economic Community of West African States
84	Mr	Junaidu	Ismail	Nigeria	Director of Curriculum Development	Nigerian Educational Research and Development Council

#	MR/MS	LAST NAME	FIRST NAME	COUNTRY	TITLE	ORGANIZATION
85	Mr	Kachalla	Bintu	Nigeria	Second Secretary	Embassy of Nigeria and Permanent Mission of Nigeria in Vienna
86	Mr	Maduka	Cosmas	Nigeria	President and CEO	Coscharis Group
87	Mr	Ofor	Kalu Michael	Nigeria	Director Technology and Science	Federal Ministry of Education
88	Ms	Her Excellency Angell-Hansen	Bente	Norway	Ambassador	Embassy of Norway and Permanent Representative
89	Mr	El Amad	Anwar	Oman	Economic Officer	Embassy of the Sultanate of Oman
90	Mr	Sultan	Suhail	Palestine	Director of Master in Business Administration	Birzeit University
91	Ms	Jovita Culaton	Viray	Philippines	International Consultant	UNIDO
92	Mr	Mastura	Ishak Veloso	Philippines	Cabinet Economic Cluster Head and Chair of Regional Board of Investments	Autonomous Region in Muslim Mindanao (Bangsamoro)
93	Mr	Araújo	Tiago	Portugal	Counsellor/ Alternate Permanent Representative	Permanent Mission of Portugal in Vienna
94	Ms	do Paço	Arminda	Portugal	PhD at UBI and Education Management Consultant	University of Beira Interior
95	Mr	Hewdes Vaz	Luis Mauvel Mendes	Portugal	Founder and Vice President	Portugal Entrepreneurship Education Platform
96	Ms	Leitao Dinis	Anabela do Rosario	Portugal	Assistant Professor	University of Beira Interior
97	Mr	Rodrigues	Ricardo	Portugal	Assistant Professor	University of Beira Interior
98	Mr	Al-Homidi	Ahmad	Qatar	First Secretary	Permanent Mission of the State of Qatar to the International Organizations in Vienna
99	Ms	Fawaz-Huber	May	Qatar	Communications Specialist	Permanent Mission of the State of Qatar to the International Organizations in Vienna
100	Mr	Mtatiro	Senseri	Rwanda	National Consultant on Entrepreneurship Education	UNIDO Kigali, Rwanda
101	Mr	Mugisha	Julius	Rwanda	General Operation Manager/Owner	Serve and Smile Ltd
102	Ms	Musabe	Joyce	Rwanda	Deputy Director-General	Curriculum and Pedagogical Materials Department, Rwanda Education Board
103	Mr	Barros Neto Zink	Ana Luzia	São Tomé and Príncipe	Head of Department	Ministry of Education
104	Mr	Apato	Jesse James	Solomon Islands	Under Secretary (Technical)	Ministry of Commerce, Industry, Labour and Immigration

#	MR/MS	LAST NAME	FIRST NAME	COUNTRY	TITLE	ORGANIZATION
105	Mr	Ha'Ahoroa	Edwin Pua'ara	Solomon Islands	Director	Ministry of Education and Human Resource Development
106	Mr	Arias Rodriguez	Víctor	Spain	Internationalization Manager	Centre of Innovation for the Vocational Education & Training
107	Ms	Chinvaroj	Jerdruedee	Thailand	Expert Educator	Office of the Vocational Education Commission, Ministry of Education
108	Mr	Jittrapirom	Peraphan	Thailand	Doctoral Student Policy Analysis Officer	Office of Industrial Affairs, Royal Thai Embassy
109	Mr	Naude	Willem Adriaan	The Netherlands	Dean, holds Chair in Business and Entrepreneurship in Emerging Markets	Maastricht School of Management, Maastricht University School of Business and Economics
110	Mr	Anala	Arime Telata	Togo	Director Youth Employment	Ministry of Basic Development
111	Mr	Ben Cheikh	Wache	Tunisia	Counsellor	Permanent Mission of Tunisia
112	Mr	Jomaa	Ghazi	Tunisia	Ambassador and Permanent Representative	Permanent Mission of Tunisia
113	Mr	Butamanya	Billy	Uganda	International Consultant on Entrepreneurship Curriculum Development	UNIDO Uganda
114	Mr	Emorut	John Okumu	Uganda	Curriculum Specialist Business	National Curriculum Development Centre
115	Ms	Mbabazi	Constance	Uganda	Director	National Curriculum Development Centre
116	Mr	Hennessey	Frank Gerald	UK	Head of Business	St. Mary's University College, Belfast
117	Ms	Gamio	Ines	Uruguay	Adviser	Permanent Mission of Uruguay
118	Ms	Duca	Karen Anne	USA	International Development Advisor	USAID
119	Mr	Loughman	Jack	Vanuatu	Exchequer Services Manager	Department of Finance and Treasury
120	Mr	Duc	Le Minh	Vietnam	Head of Trade Office of Vietnam in Vienna	Embassy of Vietnam/Permanent Mission of Vietnam in Vienna
121	Mr	Nguyen	Tuan Anh	Vietnam	Deputy Head Division of the Department	Department of Human Resource Development, Ministry of Industry and Trade
122	Mr	Al-Basha	Samy	Yemen	Officer in Charge	Permanent Mission of Yemen in Vienna
123	Mr	Al-Muafa	Fekri Saleh	Yemen	Business Development Manager	Small and Micro Enterprise Promotion Service
124	Mr	Chakonta	David Chomba	Zambia	Director General	TEVETA

ANNEX 4: ABBREVIATIONS AND ACRONYMS

ASEAN	Association of Southeast Asian Nations
ASTE	Assessment Tools and Indicators for Entrepreneurship Education
AYLF	African Youth Leadership Forum
BTVET	Business, Technical and Vocational Education and Training
COBLAS	Consulting Based Learning for Asian SMEs
ECP	Entrepreneurship Curriculum Programme
EEA	European Economic Area
ETF	European Training Foundation
GDP	Gross domestic product
ICT	Information and communications technology
INDE	National Institute of Education Development, Mozambique
INIDE	National Institute for Research and Development of Education, Angola
ISCTE	University Institute of Lisbon
IZA	Institute for the Study of Labor, Bonn
JA-YE	Junior Achievement Young Enterprise Europe
KPH	University College of Teacher Education Vienna/Krems
NCDC	National Curriculum Development Centre
NECE-UBI	Research Centre on Enterprise Science
NIED	National Institute for Educational Development
NTWG	National Working Group, INDE
OECD	Organisation for Economic Co-operation and Development
PEEP	Portugal Entrepreneurship Education Platform
REB	Rwanda Education Board
SME	Small and medium-sized enterprise
TEVETA	Technical Education, Vocational and Entrepreneurship Training Authority
TVET	Technical vocational education and training
UEAPME	European Association of Craft, Small and Medium-sized Enterprises
UNDP	United Nations Development Programme
UNIDO	United Nations Industrial Development Organization
USAID	United States Agency for International Development
VET	Centre for Innovation in Vocational Training, Spain
WDA	Workforce Development Authority
WKO	Austrian Federal Economic Chamber
WTO	World Trade Organization

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