The educational revolution
ESHA magazine is the official magazine of the European School Heads Association, the Association for school leaders in Europe. ESHA magazine will be published nine times per school year. You are welcome to use articles from the magazine but we would appreciate it if you contacted the editor first.

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The ESHA magazine is a platform for sharing vision, knowledge and experiences of school leaders to their European members. ESHA’s goal is to inform, share and promote best practice but cannot be associated with a specific political viewpoint. The author of an article is responsible for the content unless otherwise stated.
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Some articles in this issue contain direct links to websites. Simply click on the coloured text and you’ll be automatically linked to a specific website or videopresentation. Try it yourself and enjoy.
Leadership on all levels in education is needed

As the school term draws to a close many school leaders will be thinking of what the future has in store for those students leaving our schools this year. Experience tells us that many will continue in education either at university, further education and skills sector, apprenticeships or directly to the world of work. Unfortunately work opportunities for our young people, particularly those with low skills are fewer and fewer. It isn’t unusual in many countries for youth unemployment to be approaching or above 50%. This is a shocking indictment of how our society has developed when many young people leave our schools without hope and quickly become disillusioned or radicalised. At the recent ESHA General Assembly in Ljubljana delegates heard relevant and powerful presentations from the Slovenian Minister for Education Dr. Maja Makovec Brenčič and Andreas Schleicher from the OECD. The question and answer session after the presentations were very informative but both highlighted the vital role played by the different educations systems in forming society as we would like it to be. I had an opportunity to participate in a discussion with Prof Paul Reville from Harvard University and I was quite taken by insights and perspectives he articulated over the course of the debate. His view is that no matter how
good a child’s experience of school is, the amount of time spent in school is only 20% of the child’s life experience. 80% of what the child experiences in the world is outside the school setting. Middle class parents can enable their children to experience the arts, music, culture, drama and so on. This creates a cultural capital which accentuates inequality and may develop alienation among those children who aren’t as fortunate.

Prof Reville believes that a society with a vision for real change will seek to make the time spent outside school equally enriching and seek to level access to out of school learning. He believes that for the child in school, the learning and experience must be personalised, customised and differentiated depending on the child’s needs. The challenge of education reform is hard and complex. In Ireland, things happen (or don’t) in Irish education because it has always been thus. Most systems are rigid and inflexible and characterised by inertia. Reville offers the following advice for students, teachers and policy makers. Students will thrive if they can build their education experience around experiential learning. Students should lead their own learning and own their own learning. This may involve the increased use of technology but this must be mediated by teachers if it is to be most successful.

Teacher morale in many systems is low and in many instances Reville believes that teachers are clear in their view that reform is done to us not with us. Teachers are reluctant to take risks and set a new direction for themselves and their students. Teacher leadership is needed to redefine the profession and to drive change from the bottom up. Teachers should embrace new approaches to pedagogy. The teacher voice must be heard. As a society we must value and trust our teachers.

For policy makers, education must be moved to the top of the government’s priority list. Without effective and visionary education policies other initiatives will flounder. Education must be seen as an investment not as a cost. Complacency is the greatest enemy of reform. We owe it to the future generations to give them the best possible start in life. We cannot be complacent.
Thank you to the Slovenian associations for hosting a magnificent General Assembly in Ljubljana. I hope as many of you as possible will attend the ESHA Biennial *International Inspiration in Education Leadership Matters* in October of 2016 in Maastricht. Our Dutch hosts have organised a wonderful programme and further information can be found at [www.esha2016.com](http://www.esha2016.com). The workload of a school leader is onerous and stressful. I hope you get an opportunity to relax and unwind as the summer approaches and if your country is involved in the European Championship in France I hope your team does as well as they deserve but that the best team wins by playing attractive, open and sporting football.

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Agenda 2016

**JUNE 2016**
13th Entrepreneurial Leadership in education, Koper, Slovenia
   International Conference (EC4SLT)
21st ESHA board meeting

**OCTOBER 2016**
4th – 5th International School leadership training in Oslo, Norway
   Module 4 and 5
18th ESHA GA meeting, Maastricht, The Netherlands
19th – 21st ESHA biennial Conference Maastricht, The Netherlands

**2017**

**OCTOBER 2017**
23rd – 25th 4th Regional Conference in South Eastern Europe, Ljubljana, Slovenia
ESHA 2016 Biennial Conference
‘International inspiration in education: leadership matters!’

From 19th to 21st October 2016 the Dutch school leader Association AVS will organize the ESHA biennial conference in Maastricht, The Netherlands. A conference dedicated to meeting and sharing experiences of school leaders. Like-minded school heads from many different European countries will discuss current issues such as leadership, personalized and competency-based education, education in a multicultural society and lifelong learning. And all this will take place in lively Maastricht, in the south of the Netherlands!

**Inspiring keynote sessions**  Michael Fullan, Daan Roosegaarde, Zachary Walker, Mark van Vugt

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**Michael Fullan**  The well-known educational researcher prof. dr. Michael Fullan is a worldwide authority on educational reform with a mandate of helping to achieve the moral purpose of all children learning.

**Zachary Walker**  Innovator and author dr. Zachary Walker talks about the use of (mobile) technology in education. He is a faculty member at the National Institute of Education (NIE) in Singapore.

**Daan Roosegaarde**  Artist/designer and innovator Daan Roosegaarde presents his vision of a sustainable future. He is Young Global Leader at the World Economic Forum.

**Mark van Vugt**  The Dutch psychologist prof. Mark van Vugt looks at bridging the gap between leaders and followers in complex organizations.

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**School visits**  We will also connect you with colleagues around Europe during the school visits. On the third/final day of the conference, 50 school visits are planned. Take this chance to get acquainted with the Dutch educational system and meet like-minded colleagues.
Interactive tracks
The Interactive tracks cover the following themes: • Dream of the future: 21st century pedagogies • Inspire and Innovate: 21st century leadership • Global citizenship: 21st century competences • Wellbeing for 21st century kids

Locations
The conference will be held in historic Maastricht in the South of the Netherlands. Maastricht is well known as the European city of the Netherlands where German and Latin cultures meet. It is located in the lovely hills of Limburg in the heart of the Euregio where 4 million people live in 3 different countries, speaking 4 different languages. A lively city with an international university that attracts students from all over the world.

The conference is organised at the prestigious Vrijthof Theatre and several nearby café's and hotels. During the breaks, our guides will show you the city and its many cultural hot spots. On Thursday evening you can participate at the Gala Dinner at the Caves of Château Neercanne.

About ESHA
ESHA is the School Heads Association in Europe and represents 64,000 school leaders in (pre-) primary, secondary and vocational education. ESHA connects school leaders, researchers and policy makers with the collective aim to learn from each other and improve education. The ESHA Conference is organized every two year and is the leading conference for school leaders in Europe.

Great experience
Get informed about all current school leadership topics, meet hundreds of interesting colleagues, debate with the speakers in the theme cafes, enjoy beautiful Maastricht, join the Gala dinner and visit interesting schools.

More information and sign up
All details (like conference fee) are published at www.esha2016.com

Interactive tracks
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Dream of the future: 21st century pedagogies
Zachary Walker
Integrating technology
Jaap Versfelt
(LeerKRACHT)
How to change a school system from the bottom up and what it means for you
Ynge Lindvig
(Connexus)
Towards Deeper Levels of Learning with Digital Tools in Collaborative Evidence-Informed Processes
Yvonne Kleefkens
(Khan Academy)
A personalized learning and teaching resource for all ages
Jelmer Evers and René Kneyber
(Onderwijscoöperatie)
Flip the system

Inspire and Innovate: 21st century leadership
Michael Fullan
New Pedagogies for Deep Learning: a global partnership
Frank Huibos, Stefan van Langevelde and Arnoud Evers
(Welten Institute)
Distributed leadership
Roald Pool
(Leeuwendaal)
Freedom versus accountability
Ton Duif
(ESHA)
Rijnlands Education Model

Global citizenship: 21st century competences
Michael Risku
(Institute of Educational Leadership)
Entrepreneurial leadership
Hans Haerkens
(TECHNOMAAT)
Why is Technimaat a successful formula for science & technology education?
Frank Cörvers
(Maastricht University/ITEM)
Internationalisation education to cross-border labour market
Mariëtte Brugman
(Unesco)
Global citizenship

Wellbeing for 21st century kids
Remco Pijpers
(Kennisnet)
Social Media in child development
Monica Neomagus and Jacomijn van der Kooij
(Verus)
Parents and Schools: a Valuable Partnership
Clive Byrne
(ESHA)
'Bullying'
Unni Marie Heltne
(Center for Crisis Psychology)
Crisis Psychology
Huub Friederichs
(Institute Leaders in Education)
Sharing best practices on Early School Leaving

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Why feedback is not working in your school and how to fix it
As school leaders craft the future plans for their schools, they are increasingly pursuing feedback from all stakeholders – students and parents, teachers and other staff members – to complement the insights from grades and exam results. The value of well-collected feedback as a powerful instrument for individual and institutional growth is rarely disputed. However, in schools we see that receiving feedback is often treated with fear and suspicion by teachers as well as school leaders.

BY KRISTAPS OZOLINS, EDURIO

Over the past two years our team at Edurio has been working with more than two hundred schools – and thousands of teachers – to find out their attitudes towards feedback and how they use it. Unfortunately, almost every conversation about feedback in schools led to the following comment:

“But how could a student or a parent ever be competent enough to objectively evaluate my skills? They simply don’t know what it means to teach well...”

This question highlights what teachers and schools globally have been doing wrong in feedback. First, it assumes that collecting feedback and asking for evaluation is one and the same thing. Secondly, it mistakenly suggests that you must be professionally qualified to have anything valuable to say about someone else’s work. Due to these misunderstandings, many teachers simply have not
experienced what it means to get constructive feedback that really helps them to boost their teaching skills.

This can be changed by demonstrating a different way of exchanging feedback. From our work with 200 schools we have deduced 4 main principles of good feedback, that can be introduced with just a few rounds of gathering feedback and communicating the results:

1. **FOCUS ON OBSERVATIONS AND FEELINGS, NOT OPINIONS**

   Survey respondents are more qualified to give feedback about their direct experiences with the school, not to evaluate these experiences. Students and parents might not be perfectly equipped to answer questions about a vague concept such as “quality of education”, but they can definitely tell you how motivated or informed they feel day to day.

2. **ASK THE IMPORTANT QUESTIONS**

   Some aspects of your school are more important than others. You do not want to waste your own time and that of your staff and students by asking about trivialities.

   There is a wealth of research on the factors that really matter in a good education (parental support, trust, and feedback, to mention a few) – some sources for evaluating your questions are John Hattie’s *Visible Learning*, and the *Measures of Effective Teaching Survey* from the Gates Foundation.

3. **FEEDBACK IS FOR THE WHOLE SCHOOL**

   The principles of Distributed Leadership [www.schoolleadership.eu](http://www.schoolleadership.eu), developed by the European School Heads Association, emphasise that a school can flourish only if the whole school community
– including students and their parents – share a sense of responsibility for how good the school is.

The available technologies allow us to involve all stakeholders – embrace this opportunity!

4. TAKE ACTION

Feedback that leads to action shows that the participants’ voices are being listened to, not ignored. While a simple ‘Thank You’ for taking the time to complete a survey is a good first step, systematic action on the feedback is crucial.

In June 2015 a school carried out Edurio student survey on safety, including bullying. The administration quickly identified the few classes that showed cases of bullying and proceeded to work with these classes, thus solving the issues before they turned into open conflicts.

Any school is first and foremost a place where people work together with other people. How easily we can achieve our goals (and how high we can set them) depends immensely on how well we learn to collaborate with others. Developing a strong culture of feedback exchange within a school is not a simple managerial act of gathering data. A school community in which people know how to talk to each other with respect, empathy and up to the point – in other words, a mature community – really can make the school outperform itself one year after another.

REFERENCES

The Education Board of the Riga City Council Department for education, culture and sports located in Latvia, manages 115 institutions for primary and secondary education (schools) along with
150 pre-school institutions. Riga is the largest municipality in the Baltic States and contains over 67,000 students at the primary and secondary education levels. In December 2014 and May 2015 five Riga’s schools participated in the initial Edurio trials and have reported that the platform was highly useful for the schools to improve their quality assurance process. The platform was also easy to use for the administrators and respondents. The platform simplifies the process, saving the Authority time and resources and is helping to better understand school needs. In particular, understanding the process of school performance over time is now possible on the Edurio platform.

At this moment a pilot has been set up with the Eton College in the UK [www.etoncollege.com](http://www.etoncollege.com)

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**About Kristaps Ozolins**

Kristaps Ozolins is the Head of Education at Edurio – an innovative web platform for schools to manage student, parent and teacher feedback. The platform offers research-based surveys along with unlimited flexibility on final survey design and choice of respondents. Working with over 200 schools, 5500 teachers and 50,000 students, they have collected more than 100,000 completed surveys. Edurio offers a platform for schools and school networks as well as Edurio Solo – a free tool for individual teachers to collect student feedback in their classrooms.
TEAMWORK

COMMUNICATION
COLLABORATION
COOPERATION
PARTNERSHIP
CREATIVE
IDEAS
Danish schools under pressure

The Danish public primary and lower secondary schools (the Folkeskole) teach pupils from the age of 6 to 16, i.e. ten years of compulsory school attendance, and about 82 per cent of all pupils attend the public school. This article is an attempt to describe the state of affairs in and around the Danish Folkeskole after a large labour dispute 2013 and after several reforms have been implemented in the course of a very few years.

BY CLAUS HJORTDAL,
CHAIRMAN OF THE DANISH ASSOCIATION OF SCHOOL LEADERS
THE STORY UNFOLDS ALONG TWO LINES:

- The collective negotiations in 2013 between the Danish Union of Teachers (DLF), representing the teachers employed by the local authorities, and the employers in the 98 municipalities in Denmark, represented by the Local Government Denmark (KL). The negotiations ended in a conflict.
- The wish of the Centre-Left government in power at the time (2013) to implement a major reform of the Danish Folkeskole with a focus on enhancing the learning and welfare of the pupils. The reform was decided and later adopted by the Danish Parliament, not long after the labour dispute.

THE BACKGROUND OF THE CONFLICT

When the collective negotiations started DLF expected rather peaceful negotiations. The negotiations with KL in 2008 as well as 2011 took place in a good and constructive atmosphere and a mutual agreement had been reached.

However, this time it soon became clear that KL had a new agenda, i.e. that the school leader at each school should have added responsibility and the right to manage and distribute work among the teachers.

The basis of the “Danish Negotiation Model” is that it is up to the parties on the labour market to negotiate and reach agreement. If that is not possible, a conciliator is brought in. If this does not lead to a result, lockout against the employees may be initiated – or the employees may initiate a strike. If a solution is still not found, the Danish Parliament may intervene and adopt legislation on working hours.

The dispute between teachers and employers ended in a conflict as well as legislation.

KL’s wish for a normalisation of the rules regarding teachers’ working hours (enabling each school leader to decide how much the teachers were to teach) met with resistance on the part of DLF. The teachers’
union definitely did not want to let go of the right to negotiate the basic conditions regarding time for teaching and preparation. On the other hand, the Danish Association of School Leaders (SKL), which represents almost all principals in the Folkeskole, wanted to minimize the existing levels of negotiation between DLF and KL centrally, between the local authorities and the local DLF region, and between the school principal and union representative. These levels contributed to limiting the school leaders’ possibilities of spending the resources in a flexible and appropriate way.

THE RESULT OF THE CONFLICT
KL and DLF were unable to reach an agreement, so in the spring of 2013 KL took an unusual step: a lockout against the teachers, which meant that about 50,000 teachers in the Folkeskole were sent home from work.
In the course of the lockout, the tone between KL and DLF became
very rough. Particularly the employer, KL, used highly negative rhetorical about the teachers. As there were no signs of a settlement, the government intervened after 25 days during which the Danish schools were more or less paralysed.

A new act was adopted by a large majority of the Danish parliament, Act 409, which affirmed largely all of KL’s demands. At the same time, DLF lost an otherwise agreed salary raise as the negotiations failed.

As a result, the possibility for DLF of creating central rules for teachers’ working hours became almost non-existing. Teachers have to spend a large part of their working hours at the school, preparation must in principle be carried out at the school, and the school leader can decide the number of lessons to be taught by each teacher. Of course, the working relations were not improved by a situation like this where the employers took such an unusual step which ended in a major defeat for DLF.
SKL reacted against the method and the rhetorical used. We tried to mediate and encouraged continuous negotiations. We did not support the decision, although we were in favour of the changes brought by Act 409. An act is definitely the last resort in a negotiation process. It brings no peace – at best a standstill.

THE BACKGROUND OF THE SCHOOL REFORM
At the same time as the labour dispute, the government wanted to reform the content of the school, and this wish was supported by most parties in the Danish parliament. Consequently, the reform was adopted at the end of 2013 to become effective from the school year 2014-2015.

The Parliament wanted a longer and more varied school day. There was a process in which all stakeholders in the schools, including KL, DLF and SKL, discussed the content of a new reform. Three overall goals were set up with the inspiration from Canada:

- The public school must challenge all students to reach their full potential.
- The public school must lower the significance of social background on academic results.
- Trust in the school and student well-being must be enhanced through respect for professional knowledge and practice in the public school.

Add to this more detailed learning goals and an obligation to achieve more systematic and documented efforts, among other things in order to enable the school leaders to monitor the teachers’ planning and teaching more closely.

The pupils now have a longer and more varied school day – with more lessons, more physical exercise, openness towards and cooperation with the community, and the introduction of new teaching methods. This means that Danish pupils now have the highest number of annual lessons in the world.
The financing of the additional lessons was agreed between KL and the Government in direct connection with the conflict about working hours, so that the teachers were to teach on average two additional lessons without compensation. This decision meant that DLF no longer supported the reform.

The teachers got no positive result from the negotiations, and now they would even have to teach more without any compensation.

All in all, the school reform – which SKL supported throughout the process – did not get the best starting point for becoming a success. Because of the lockout, the reform was born in conflict, born with poor funding, born in a hurry (had to be adopted and implemented while the Government was still in power) and born during a period with generally poor national economy.

The poor state of the economy puts much pressure on schools and school authorities. A decreasing number of pupils deteriorate the financial situation of the schools because of the allocation models used.

Very large structural changes have been carried out during recent years, resulting in closing down or mergers of schools, classes and staff. Add to this other major reforms, such as the inclusion in the Folkeskole of pupils who would earlier receive special education elsewhere, and large tasks in connection with integration, children of refugees, etc.

Act 409 and the reforms of the content, structure and financial situation of the Folkeskole resulted in much unease and a poor atmosphere among teachers. We see more absence because of sickness, more teachers retiring, more teachers trying to get a job elsewhere, parents moving their children to private schools, and employees generally lacking motivation because of the lockout.

The cooperation between KL and DLF has stopped. The parties have no mutual trust and faith in each other. In 2015, a small agreement was reached in the collective negotiations, but the parties have not
been able to follow up on the agreements made. When Act 409 was linked to the new school reform, the support of DLF for both was lost at the same time. DLF is now working to abolish both. Both have, however, been adopted by a very large and politically broad majority in the Danish parliament, so the new collective agreement and the school reform have come to stay – and at the schools, leaders and employees are working on the basis of the conditions adopted by the politicians. A conscious effort has been made to ensure that the pupils have not been affected adversely. As school leaders we have spent a lot of time creating a good implementation and translation of both reform and Act 409. Much praise has been given by politicians, teachers and society for the work carried out by the school leaders during the past three years. In spite of very poor odds, we have succeeded in creating good results.
Many teachers find that Act 409 can work in practice. They also find that many of the ideas in the reform are good and that they have the potential to improve the skills of the pupils.

BUT the financial conditions are poor. Schools suffer from constant cut-backs and increased demands. Teachers and pre-school teachers do not have enough time to cooperate and prepare the teaching. Funds are insufficient for co-teaching or supporting classes for children with special needs.

12 per cent of the teacher jobs and 15 per cent of the leader jobs have been cut during the past six years. This means that school leaders are incredibly overloaded. Particularly during the initiation of the reform, we have seen increased absence due to sickness, increased stress and quite a lot of leaders retiring.

**CURRENT STATUS FOR THE REFORM**

In future, the fight about the school will be fought on several fronts. The reform increases focus on the competence of the pupils, test and data. Those opposing the reform say that we should return to the school as a cultural institution and re-invent the professionalism of teachers, so that the teacher will fundamentally be central to what goes on in the classroom.

Much is said at the moment about the negative influence of New Public Management on the reform. There is a fear of narrow goals pursued blindly and of the disappearance of former Danish school traditions concerning the teachers’ freedom to organise and carry out teaching.

The fight for influence continues. Politically, we have a new government which basically does not want to make any changes to the reform. Small changes may occur, but the basic thoughts will be maintained. DLF and KL will therefore have to find a new position before the next negotiations about collective agreements and working conditions in 2018.
At the same time, the fight about the funding has escalated. A prolonged financial crisis is felt in Denmark and continued cut-backs are expected. Politically, there is at the present a wish to give priority to old and sick/disabled people. And the increasing number of refugees in Europe adds to the expenses of the municipalities. We are worried that money will not be allocated to financing the longer school days. We are suffering already and in many schools it will be impossible to make ends meet with less money.

The Danish Association of School Leaders is fighting to secure the financial conditions of the Folkeskole. We try to influence politicians in order to ensure that money is allocated to the schools. We are fighting for proper conditions for the school leaders so that they will survive in their jobs, and we are fighting for the re-creation of confidence in schools as well as the negotiation system.

**FUTURE PERSPECTIVES**

The well-known theorist in change management, John Kotter, estimates that implementing change will take eight years, and the Danish school reform is an ambitious change. So when both the former and the present Danish Minister for Children, Education and Gender Equality have said that it takes time to implement a reform, we have as school leaders not given up hope that time and resources will be found so that the work can be done properly.

We have – and must have – the courage to change the traditional structure of a school day. Consequently, we also try to focus on the successes and the fact that we are already on the right track. The preliminary results so far are not bad at all:

- Teaching controlled by goals is finding its role in the day-to-day life at schools.
- Pupils have become more aware of why – and what – they must learn.
• Parents can follow the learning of their child via the electronic plans for the pupils and through dialogue with teachers and pre-school teachers.
• Learning goals and feedback are used, and relevant data is used to develop teaching and learning.
• School leaders and resource persons visit classrooms and give feedback to teachers.
• When the pupils are involved in setting their own goals, working towards these goals makes sense for them.

With the different competences they offer, teachers and pre-school teachers cooperate more closely about the learning and the welfare of the pupils. The new tests in science and cultural subjects encourage a new way of cross-disciplinary thinking, but also the planning of a varied and flexible school day. The school and the community have opened up to each other, and cross-disciplinary work and cooperation exist throughout the country. This means that there are good examples showing that principals, teachers and pre-school teachers work in a committed, professional and targeted way – in cooperation with all stakeholders in our schools – to make all pupils reach their full potential.

Read more about the Danish school reform here:
How do we talk to children about the terror threat?

Psychologist Magne Raundalen collaborates with the Center for Crisis Psychology. He’s concerned with the importance of identifying the right frameworks in which we can talk to children about the risk of terror.

At the very least, we need to do something at a national level in relation to children. Now that the majority of those we consider experts tell us that terror as a weapon will most likely be used on Norwegian soil. The experts describe a great political power play in which only mildly religious players continue to recruit and turn deeply religious people into holy warriors. Terrorists, that is. Many among them sacrifice their own and other’s lives for and to their god. They believe, in other words, that it’s not religion (Islam) that acts as the central motive for those who leave their homes to
conquer holy land in the Middle East. To use their strongest weapon, terror, against our military superiority and drones, they must recruit those who practise blind faith. That’s the backdrop.

My main point is that loud and credible voices assert that the terror is coming to us. And in the aftermath, we, our children, and our grandchildren, must prepare to let our lives move on as undisturbed as possible – so that the terrorists don’t achieve their other goal of destroying our freedom, diversity, values and democracy. As a nation of responsible adults we must create frameworks, and find the right words and methods of how to shape the message we want to convey to our children and grandchildren about this relatively new, almost unanimous, recognition.

In regards to our conversation with children, what I want to talk about first is also something I’m having a hard time formulating properly. But it revolves around the idea that I believe we should tell our children that they don’t need to fear terrorists here! Now, I’m not at all suggesting we tell them it can’t happen here – that would be completely wrong considering the current global situation.

What I think we could tell our children, who go about their daily lives around the country is this: I don’t know how many residential communities there are in Norway, but let’s say there are 100 000. One hundred thousand, with 100 persons or more living in the same area. In larger cities, these residential areas are obviously more abundant, and they’re packed tighter together. Then I’d say to those children 5-6 years old and up: If a terrorist attack takes place in Norway in the next ten years, there would probably be two or three horrible events in places the terrorists select from those 100 000 areas. Which means that in ten years, there would have been 99 997 places where nothing horrible happened at all.
Of course it’s awful if someone with an explosive belt blows Norwegians and others to death in a big crowd, two or three places in Norway over the course of 10 years. The whole country would react with grief and horror. But my message is this: you don’t have to walk around afraid every day, thinking that anything can happen anywhere, maybe right where you live and walk and are. Because that simply isn’t the reality. The reason this is difficult to put into words is because we have to avoid the notion that you can walk through life, happy and carefree, because someone other than you will experience that horror, if the horrible were to happen in one of those 100,000 places. Perhaps we could use the news before Easter traffic as an example, at which time the traffic police announced about one of the days that this, this was the major day for accidents during Easter traffic. They knew this from the numbers from previous years. You got into your car, buckled up, found something to do, a book, a game, the iPad, preferably that last one perhaps, and you sang and laughed on the way home, mile after mile on the worst accident day of the year. Maybe we can help children to think a bit more along these lines? Though, once again: perhaps that brings us dangerously close to “It happens to everyone else – just not me and not us. Thank goodness!”

When we give advice about talking to children about horrible events with an enormous media coverage, and especially when children
themselves have been affected (at which time it reaches them more quickly and with more force), we have two perspectives: the therapeutic and the pedagogic. We want children to feel as safe as possible in their everyday lives; the therapeutic perspective is particularly relevant for the youngest children. And we want them to gradually, with age and sense, gain an understanding of what happens in the world they find themselves in. This means that parents, kindergartens and schools need to have a carefully thought-through program for how to achieve just that. No matter how good and well-oriented they are, we can’t let Children’s BBC or TIME for Kids be the sole sources of information in a child’s world.

When we’ve gotten this far into our conversation with kids they often ask “Why did they do it?” The answers to this question are important, and diverse. We can’t hide the fact that those who blow themselves up are often young people. And they are bad people. Because they kill innocent people, adults and children, like at the airport and subway in Brussels, Belgium this Easter. Why do they carry out these horrible, cruel actions when they themselves die? To start off, they have become bad because they have had bad and poor lives. But even so, that doesn’t justify killing anyone. Then they’ve come into contact with online groups who preach hope and light in the message of personal beatitude. These new believers are lured and used by horrible leaders who first and foremost want more supporters for their group, and who want to scare people and countries so that they gain more power, and more land. But the young people must understand that this is wrong? Horribly wrong, to kill people who are just going overseas to travel, or sit in a café like the people in Paris in November? And the very hardest thing for children to understand, is that the perpetrators themselves die – they have an explosive belt under their sweater, and they blow up too, into little pieces along with everyone else who dies around them, and everything that’s
destroyed. The scary thing is that those who sacrifice their lives by doing this, they believe that they’re doing something very good for their god. They are Muslims, and a few extreme Muslims have made them believe that if they fight and die for their religion, they’ll reach janna, Heaven, and not just Heaven, but the 8th garden where everything is wonderful. But, can they believe that? The answer is yes. It’s totally wrong, and most Muslims say that it’s totally wrong, but those who do the horrible, believe it is their god’s will. Those who die for their god have gotten their very own name: they are martyrs. And then they’re heroes, and people make many pictures of them and hang them up. And they are celebrated in many of their families who believe the same as they do. And many people think that they’ll soon see them again in Janna – in Heaven, at a great feast. They just believe it! In correlation with age and development, children need to be introduced to and explained all the work that goes into preventing the spread of this dangerous belief system. And that it works! The older children should be told that steadfastly belief in eternal salvation, for the good and pious of course, and eternal damnation in a burning hell for the evil, and bad, and disbelievers, has been very much alive with us in our own religion.

At this point, older children will often say that if this is the case, faith is dangerous. In reality, it shouldn’t be. Faith should work as rules for people so that they do good things in their lives. But like with all things, religion too can be interpreted in different ways. And then it becomes dangerous, if it makes suicide bombers kill themselves to kill others, and to scare people. The older kids, from 10-12 years and up, can also take part in other insights we have in this field. And, of course, all children must be told about the police’s many attempts to discover threats and protect us from them. Still, we have to be prepared for it to happen. It’s horrible for me to write this, but I don’t think there’s any way around it.
When it comes to conversations of this kind with children, we must learn from each other. We need to be told by kindergartens and schools about what kinds of conversations arise spontaneously. Like this third-grade student asked their teacher in one of the country’s smallest and safest schools, far from the centre of the terror: “Is World War Three coming now?” We’re not empty-handed. For 15 years, the Center for Crisis Psychology has made suggestions for dialogue about horrible events, both near and far away – everything from New York in 2001 to Utøya, Norway in 2011. Earlier this year, The Norwegian Armed Forces requested a guide from the Center, for a parental guidance meeting about conversations with children about terror when mum or dad are preparing for or participating in field assignments. Because of its general value, they’ve published this parent guide online. It’s a start, but we have to do more. We can’t allow today’s terrorism to plummet into the children’s world as free-flowing fear. In the big picture, this is about restoring democracy and humanity with the next generation.
Responsive Language Acquisition: A Singapore Paradigm

One of the constants of the 21st Century is the paradigm of constant change. Not surprising then against this backdrop of globalization have been rapidly evolving standards and expectations, especially in the area of second language learning. Chinese is regarded as the world’s oldest and richest language and culture, broad and profound, yet a difficult language to learn. As China has opened up, understandably there is an increasing interest in learning Chinese as a foreign language and understanding Chinese culture, especially in our connected global society.

BY ROB STOKOE
AND GABRIELLE ZHOU LIANC
It is important from the outset to understand that effective language acquisition must embrace the cultural dimension. The two are not and never can be mutually exclusive. We are all aware of the intertwined relationship between language and culture; it is an intimate connection. It is not feasible to understand a culture without learning the language and vice versa. Learning a language is so much more than learning words, grammar etc. It is also, learning about culture and behaviour. Essentially, language is culture and culture is language.

**Evolving Pedagogies**

This challenge combined with a growing understanding as to how children learn is causing our pedagogy to evolve rapidly. As teachers collaborate globally, they are developing more effective approaches to learning which inform purposeful endeavor focused upon the mastery of defined skills which are crucial in informing student success. In the past, language learning has too often given a strong emphasis to a limited pedagogy based upon grammar translation, rote memorization and standardized assessment. At its best, language learning is innate. The acquisition of language is a natural, almost sub-conscious skill acquisition. To continually inform better futures for our students, we need to continually question current and past practice as well as careful consideration of new knowledge and initiative. We need to be informed, considered and flexible. We need to offer challenge, encourage engagement and deep learning in order that we develop a context where we are able to activate learning and assessment pathways.

**Positive Attitudes Often Determine Success**

Language acquisition depends on a person’s language learning ability, motivation, learning environment and prior experience in learning foreign languages. Positive attitudes often determine success. In our
classrooms we need to be aware of how our students learn. Choice, engagement and enjoyment are important to us and have a positive impact upon proficiency. Our students merit a positive exposure to language which engenders the confidence to practice using it. To actually use what you learn is highly motivational. The job of our educators is to make the content relevant, accessible and interesting. Our choice has been to offer a clear focus to listening and speaking-verbal success -first.

Another factor is the extent to which the target language is similar to or different from the learner’s first language. Proficiency in language learning is usually measured in terms of the following skills:

- Speaking
- Reading
- Listening
- Writing

In seeking to develop proficiency in Chinese as a second language, a number of key strategies have been developed and adopted by the Chinese team in order to facilitate engagement and growth in what is recognized as a difficult language to learn. Chinese language and, in particular, the writing skills are rated as DLI Category 4. In response to these challenges, the school has developed a bespoke approach,
clearly defined within a detailed, progressive curriculum experience for students. In terms of delivery, little and often is the approach with children at 3 years of age receiving five periods weekly of thirty minutes duration. Eight- to thirteen-year-olds experience sessions which are 45 minutes long. Content is also delivered progressively as is the emphasis upon the four areas of learning. We deliberately focus upon speaking and listening in order to build up vocabulary and develop confidence within our children. The key idea is to simplify the language but not the content.

In seeking to simplify the language but not the content in teaching Chinese as second language, several strategies are working very well in classes across the school:

**STATE CLEARLY THE LESSON INTENTION OR AIM**

It is essential for second language learners to know the lesson intention or aim at the beginning of the class. It is often written in the same place on the board for Year 3 and above, while it is projected on to the interactive white board for lower year levels. Learners get to have some idea of the topic even without having prior knowledge. They also seek relevant information from their first language or from their peers.
IMPLEMENT GESTURE RESPONSIVE TEACHING AT ALL TIMES

Gesture responsive teaching (GRT) serves as a means of scaffolding students’ understanding in learning Chinese. It helps greatly to support students’ understanding of the teacher’s instructions, lesson content and class activities, and builds their confidence in listening comprehension.

In Chinese class, the majority of the gestures were created by students, which reflects their understanding of Chinese Hanzi in

About Rob Stokoe

With forty years’ experience within Education I can both look back over a range of stimulating and challenging experiences and an educational paradigm which has been subject to constant change. With over 30 years leadership experience including Primary, Secondary and a 5 year spell with the University of Sunderland it’s fair to say that my career has been varied. I have had the privilege of working with and alongside many gifted and dedicated educationalists that have inspired and informed my growth over time.

Adding in Inspection and evaluation work with OFSTED and the International Baccalaureate as well as 16 years leading a highly regarded International School all of which have led me to a position where I am still, listening, learning and sharing, continually hoping to stimulate debate and growth for the most valuable of professions. Recent recognition includes the award of an OBE for services to education and the publication of my first book, Leaders of Learning.
vocabulary and in sentence structures. Those gestures could either reflect the sound or the meaning of vocabulary, which back up students in class activities. Thus they retain a longer memory for vocabulary and sentence structures. Gesture responsive teaching ensures students understand the spoken language before developing the skills of speaking. Students are not forced to speak, but are provided with an individual readiness period and encouraged to speak spontaneously when they feel ready. The technique combines information and skills through the use of visual, auditory and kinaesthetic sensory systems. Gesture responsive teaching guarantees a fun and interactive learning environment with full participation by all.

**About Gabrielle Zhou Liang**

Gabrielle Zhou Liang is a language teacher, teaching Chinese as second language in international schools in Singapore for past 10 years. She specializes in using Gesture Responding Teaching as a scaffolding tool to teach non-native learners aged 3 years old above. Gabrielle develops Chinese curriculum from preschool to year 8 based on the Australian National Curriculum in Avondale Grammar School.

Gabrielle received a Master’s Degree in Teaching Chinese to other Language Speakers from Jinan University, China and a BA in primary education in Beijing Normal University. She truly believes that learning is a life-long journey and that we need a clear awareness, an understanding, of what works in learning. Teaching, although incredibly demanding is a very purposeful profession, after all, we change the world one day at a time.
students. It is a great interactive tool for younger students to learn cooperatively, effectively and naturally.

SET UP VISUAL PROMPTS
All the visual prompts are valuable and helpful, making the learning journey more interactive for everyone in the class. Visual prompts can be display boards, pictures, words, diagrams and Thinking Maps®. We use Thinking Maps® to teach Chinese as a second language which has greatly reduced the use of media language. It offers more thinking time for second language learners to develop a deep understanding of Chinese, to consolidate Chinese Hanzi while integrating into the new words and grammar. It makes syntax knowledge more fun and engaging with improved learners’ participation and interest.

MAKE IT MEANINGFUL AND PURPOSEFUL
As second language teachers, we have to think carefully before we talk to learners. There is one rule that always applies in class: to create a context for effective learning which relates directly to every child, keeping the content purposeful and meaningful.

PACE: KEEP THE LESSON MOVING
Pace is of critical importance. Currently we consider that individual sections of our language lessons should last 5-6 minutes within a 30-minute period. We have a clear focus upon building vocabulary, developing effective listening skills and the confident use of Chinese language. With such a clear focus upon speaking and listening, our intention is that our students build their vocabulary to a level of 300-400 words over a three-year period before we seriously consider writing. Pace is in the learners’ hands. Students are offered great opportunities to share what they have learnt. Opportunities include repeating after the teachers, peer talking/peer checking, linguistic games (survivor, music statue, Chinese whispers, word debut etc.),
recording and hands-on projects. Thus the repetition of known words, phrases and sentences consolidates learning and builds confidence, which leads to the great positive learning atmosphere we enjoy in class.

TECHNOLOGY A POSITIVE ACTIVATOR

ICT is learner friendly, offering the opportunity for independent learning and achievement in a fun and effective way. Programs such as ‘Quizlet’ and ‘Socrative’ offer diversified opportunities for maximum progress in a responsive, occasionally diagnostic context.

In the Early Years, the application of new technologies offers the opportunity for safe and playful learning opportunities with an emphasis upon interaction and playfulness. The teacher’s role is to bring a focus to the enjoyment of “playing with language”, gaining familiarity with the sounds of the target language. Songs, rhymes and stories can inspire effective learning. Programs such as ‘Kids learn Mandarin’ and ‘Quizlet’ are recommended; they are especially good for flash card exercises and games.

When students move on to the next stage in learning they continue to use and enjoy these play based activities as they further discover the relevance of language and experience success. They also grasp the cultural aspects of language and its application in the real world. Bilingual games such as ‘Spinner’ and ‘Word Bank’ offer opportunities for both individual and collaborative success.
WE HAVE GREAT BELIEF IN OUR LEARNERS
and that communication is the primary purpose of any language. We share the belief that they can all learn successfully and apply their learning using Chinese language purposefully and spontaneously. Our learning environments are held together by positive relationships and learning is deliberately organized to accommodate structured exchange of language between learners. New learning is informed by a high level of use of the target language, great listening and a blend of paired and group activities. Our learning always emphasizes co-operation, with students benefiting direct and active involvement.
References and further reading:

1. The Defense Language Institute categorizes languages into four levels of difficulty.
   - Category I languages are easier to pick up, while moving on up through Category IV, language comprehension is more difficult, and the length of courses reflect that.
   - Category I languages, 26-week courses, include Spanish, French, Italian and Portuguese.
   - Category II, 35 weeks, includes German and Indonesian
   - Category III, 48 weeks, includes Dari, Persian Farsi, Russian, Uzbek, Hindi, Urdu, Hebrew, Thai, Serbian Croatian, Tagalog, Turkish, Sorani and Kurmanji
   - Category IV, 64 weeks, includes Arabic, Chinese Mandarin, Korean, Japanese and Pashto

2. Patricia Mertin: Breaking through the language barrier, John Catt Publication, 2014


4. Rob Stokoe: Leaders of Learning: The Vision, Clarity of Purpose and Drive Needed for Outstanding School Leadership, John Catt Publication, 2014

5. 蔡丽：《华文趣味教学理论与实践》，广州：暨南大学出版社 2015
Entrepreneurial Leadership for School Leadership Teams
A professional enquiry-based approach

The Entrepreneurial Leadership for School Leadership Teams (EC4SLT) project is an Erasmus+ Strategic Partnerships project. The project focuses on an area that few previous studies have investigated: can ideas of “entrepreneurial leadership” from the business world be usefully applied in educational settings?

BY SUE ROBSON, PROFESSOR OF EDUCATION, NEWCASTLE UNIVERSITY, UK
Until recently there has been no compelling argument that school leaders require entrepreneurial attributes. However recent changes in the education landscape lead us to think that entrepreneurial attributes from the business world may be desirable and useful in educational leadership teams. School leaders are under increasing scrutiny. The changing role of government or state agencies in education signal a move from compliance to performance. At the same time new forms of publicly supported educational units, services and resources are emerging, with educational leaders who are dynamic, resourceful, opportunistic, creative, and risk-taking. Increasingly it is being recognised that new and collaborative forms of leadership are needed, and that innovative professional development opportunities should be created to support school leadership teams to meet the ever-changing demands of their roles.
Research suggests that exemplary, innovative leadership development programs share a number of common features. These include having a clear theory of leadership to frame and integrate the program; a coherent curriculum that involves active learning strategies; and collaborations or partnerships for program development and delivery.

The EC4SLT university partners are working closely with school leadership teams in the UK, Finland, Slovenia and Romania to design and develop a coherent and meaningful curriculum. This has been formed around a number of modules that embrace emerging theories of entrepreneurial educational leadership. The modules are underpinned by a professional enquiry methodology. The school leadership teams select the focus for their enquiry and commit to researching and improving their own practices in their respective workplaces, with the aim of influencing the practice of individuals, teams, with educational, social and cultural benefits for the school and the community in which they operate.

Pathways School and Education Other Than at School Service (EOTAS) leadership teams discuss their professional enquiries
The enquiries might focus on:

- **Strategic thinking** e.g. situation assessment; strategic growth plan; Preventing absenteeism in school, Nicolae Tonitza Fine Arts High School, Bucharest

- **Team building, personnel management & development** e.g. Improving communication among staff’ Ljutomer High School; Curriculum Development, Economic High School Virgil Madgearu, Bucharest

- **Communication & negotiation skills** e.g. collaborating with parents, Pathways School and EOTAS, UK

- **Financial resources mobilization & optimization** e.g. Creative use of resources (with focus on staff) Elementary School Vodice; Centre for Hearing and Speech Correction (CKSG) as publisher, Bucharest

Supporting school leadership teams to adopt a professional enquiry approach strengthens relationships within the teams and also with their key stakeholder groups. Two of our partner school leadership teams in the UK, Pathways School and Education Other Than at School Services (EOTAS), have embarked on enquiries into Parental Engagement. They will draw on evidence emanating from:

- Number of positive phone calls home
- Number of home visits undertaken
- Percentage of parents/carers attending PTA meetings and parenting programmes
- Percentage of parents/carers attending celebration of learning events
- Percentage of parents attending family learning events
- Percentage of parents engaging in six weekly meetings
- Staff questionnaire regarding barriers and good practice when engaging parents/carers.
As University partners in the project we are supporting the schools to explore the role of the School Leadership Team in the change process. We are exploring ways in which the leadership dynamics of school leadership teams can be developed to capitalise on the individual and collective strengths of team members. Support can take the form of challenging questions:

- To what extent will the School Leadership Team lead this project and/or enable others to lead?
- To what extent will the School Leadership Team have conversations with staff and/or enquiry leaders?
- Who owns the enquiry?
- How will the School Leadership Team foster the current levels of motivation of staff?
- In approaching new change processes, how do you as a leadership team plan this strategically and which aspects of “entrepreneurialism” are to be developed?

By asking facilitative questions about process, methods, vision and goals provide tools and resources that may be useful, University partners can help to shape the ways in which the enquiries are communicated. The aim is that the research becomes a ‘process of investigation leading to new insights effectively shared’ (HEFCE, 2009: 52). Our professional enquiry approach adopts Lawrence Stenhouse’s (1983) definition: ‘research is systematic enquiry made public.’ In this way research can help entrepreneurial school leadership teams to express their meanings, values, interests and concerns about their professional roles, and enable them to support each other to bring useful knowledge into personal and collective leadership practice (McNiff, 2013). The professional enquiry process provides:

- a frame: a structure to support communication of strategic thinking and beliefs;
• a lens: a process through which different ideas and understandings about practice and inquiry can be shared;
• a scaffold: supporting strategic developments;
• a measure: to capture changes as they occur (Robson et al., 2013)

References
• McNiff, J. Ed. (2013) *Value and Virtue in Practice-Based Research*. Poole: September Books

See also: sue.robson@ncl.ac.uk

The Entrepreneurial Leadership for School Leadership Teams (EC4SLT) project is an Erasmus+ Strategic Partnerships project. The partners are Newcastle University in the UK; University of Primorska, Slovenia; University of Jyväskylä, Finland; Bucharest University of Economic Studies, Romania; edEUcation, UK and the European School Heads Association.
On behalf of the EC4SLT consortium you are invited to join the final international conference on June 13, 2016 in Koper, Slovenia. EC4SLT Entrepreneurial Competences for School Leadership Teams is a project which aims to identify key successful entrepreneurial competences from the business world and adapt them to a school leadership context. The project has developed training modules for School leadership teams, which are designed to equip the teams to accelerate the pace of school improvement and lead and manage with greater school autonomy. At the final conference you will be introduced to the outcomes of the EC4SLT project where entrepreneurial school leadership will be presented and discussed via keynote sessions and workshops about the usage of the courses.

DATE: June 13th 2016
TIME: 9.00 – 17.45 hrs.
WHERE: University of Primorska, Faculty of Education, Koper, Slovenia
PROGRAM:

9:00 AM  Registration
9:30 AM  Welcome - Introduction to EC4SLT and entrepreneurial school leadership by professor Sue Robson, Newcastle University, UK
9:45 AM  Keynote – Entrepreneurship for educational leaders by prof. Michael Laviolette, Novancia Business School Paris and research associate, University of Lyon, France
10:15 AM Introduction to professional enquiry by professor Sue Robson
11:00 AM Break
11:30 AM  Professional enquiry workshop by professor Sue Robson
12.30 PM Lunch
13.30 PM  Workshop session 1 – all 4 workshops (round 1)
   1. Strategic Thinking and Vision by Sue Robson
   2. Teambuilding, Personnel Management & Development by Mika Risku
   3. Communication & Negotiation Skills by Marian Nastase
   4. Financial Resources Mobilization & Optimization by Majda Cenčič
14:45 PM  Workshop session 2 – all 4 workshops
           (round 2 as in round 1)
16:00 PM  Plenary to reflect on the day and Q&A session chaired by Huub Friedrichs, Institute Leaders in Education, Amsterdam, The Netherlands
17:00 PM  Drinks and bites

For more information on the project visit the website visit the website [www.ec4slt.com](http://www.ec4slt.com) or contact Monique Westland via [monique.westland@esha.org](mailto:monique.westland@esha.org)
On the project Entrepreneurial Competences for School Leadership Teams (EC4SLT) – Progress in Slovenia

In many aspects, managing a school is similar to managing a small company. School heads need entrepreneurial skills in order to effectively manage their schools. Unfortunately, only very few universities offer formal entrepreneurship training for school heads. For this reason, ESHA together with Newcastle University / North Leadership Centre (UK), EdUcation LTD (UK), the University of Jyvaskyla / Institute of Educational Leadership (Finland), the University of Primorska (Slovenia) and the Bucharest University of Economic Studies (Romania) aim to develop a training course to equip school leaders and aspiring school leaders with the necessary entrepreneurial competences to lead, manage and improve schools. The name of this project is Entrepreneurial Competences 4 School Leadership Teams (EC4SLT), its web site is located at www.ec4slt.com . The courses will be made available in August 2016 free of charge, to all ESHA members

BY MAJDA CENCIČ & TINA ŠTEMBERGER, UNIVERSITY OF PRIMORSKA, FACULTY OF EDUCATION, KOPER, SLOVENIA
This article focuses on the work that has been done in Slovenia. The project EC4SLT and the list of competences were previously described in the ESHA magazine (Verboon, 2015).

ENTREPRENEURIAL SCHOOL LEADERS’ COMPETENCES

One of the definitions of entrepreneurship, also adopted and supplemented by the Thematic Working Group on Entrepreneurship Education (2014) defines that entrepreneurship refers to an individual’s ability to turn ideas into action, to be innovative, take risk, plan and manage projects with a view to achieve objectives (Treaty, 2006, in Entrepreneurial School Leadership, 2015) and being able to seize opportunities (Thematic Working Group on Entrepreneurship Education, 2014, p. 8).

Entrepreneurial competences comprise of components that are deeply rooted in a person’s background (traits, personality, attitudes, social role and self-image) as well as those that can be acquired at work or through training and education (skills, knowledge, experience) (Mitchelmore and Rowley, 2010). Entrepreneurial competences are closely linked with leadership and management competences, where management competences are about what managers should be able to do, whereas leadership and entrepreneurial competences are more about how people behave and developing leadership and entrepreneurial competences is about helping people to learn to behave in certain ways (ibid.).

Entrepreneurial competences require active methods of engaging learners to release their creativity and innovation; entrepreneurial competences and skills can be acquired or built only through hand-on, real life learning experiences and with cooperation and partnership with colleagues (Entrepreneurship Education, 2013, p. 5).
ABOUT THE PROJECT »ENTREPRENEURIAL COMPETENCES FOR SCHOOL LEADERSHIP TEAMS”

One of the objectives of the project is to establish an enquiry network to identify best practice and identify gaps in provision in the delivery of four areas of entrepreneurial competence: (1) strategic thinking and visioning; (2) team building, personnel management and development; (3) communication and negotiation skills; and (4) financial resources mobilization and optimization. On the basis of literature review the four competences areas mentioned have been broken down to corresponding competences.
Table 1: School profile of involved schools in Slovenia

In each participating country (Great Britain, Finland, Romania and Slovenia) four primary and secondary schools or other educational institutions were invited to take part in the project. As a result, in addition to the University of Primorska, the Slovenian team includes the following four partners: two primary schools, one high school and the institution engaged in work with deaf and hard of hearing students (see Table 1.)

The schools are located in different parts of Slovenia. (Figure.) Based on the criterion of “good example schools”, four schools were invited
to participate in the project. However, two of the initially invited primary schools were not prepared to engage themselves in the project, so we invited two other schools which accepted to take part in the project.

The first contact was made via e-mail through which we arranged the date and time of the first meeting. Members of the University project team held meetings with the participating school teams at their schools in May and in the beginning of June 2015. From each school 6 members take part in the project: in addition to head teacher, the deputy head teacher and heads of professional teams—usually selected and invited by the head teacher.

The first meetings at schools revealed the better developed competences were those in the area of team building, personnel management and development, and in the area communication and negotiation skills. As expected, the school teams report to be less competent in the area of financial resources mobilization and optimization.

A two days’ workshop for all participating school teams was held in October 2015 at the University of Primorska, Koper. The workshop was well accepted by school teams, and they are presently looking forward to the opportunity to meet with other participants – teams from other schools again. The workshop was run on the basis of cooperative learning. The work was mainly organised in groups, which were (depending on the objectives) composed of members from the same school or from different schools. For each school critical points were also identified and cooperative action research aimed to improve the situation was planned. The cooperative research (professional enquiry) is expected to be completed by June 2016, when participating schools are going to present their findings at the final international conference in Koper (13 June, 2016).
In Table 1, the titles of the research identified by each school are presented.

As the project has not been finished yet, no final results are available at the present, except that considerable interest in the topic entrepreneurial competences has been detected among schools; generally the selected schools namely agreed to participate in the project without delay. The interest in the topic thus indicates educational professionals’ lack of knowledge in the area of entrepreneurship. The work at the first workshop (Figure), which was based on active engagement and self-reflection, was also positively accepted by all participating schools. Interest demonstrated in the joint workshop at the seat of the University points to the interest in linking and creating partnerships among various institutions.
School teams are working on professional enquiry they had selected (see Table 1). On 12 April 2016 dissemination workshop for school leadership teams was held at the University of Primorska. Primary and secondary school leadership teams from Slovenia were invited to participate at the workshop. At the occasion, the four institutions participating in the project presented their preliminary work. The whole research process and the final results will be presented at the international conference (June 2016).

In addition, we are organizing another workshop in May, which is going to be a training workshop for primary and secondary school leaders and potential school leaders on team building, personnel management and development.

**CONCLUSION AND IMPLICATION FOR EDUCATIONAL POLICY AND PRACTICE**

As in schools head teachers play a prominent role, it has been increasingly evident they urgently need competences in the area of entrepreneurship. The fact is that various educational changes demand entrepreneurial leadership (Hentschke, 2009).

Among implications for educational policies we point out the case of training that emerges from practice for practice, through reflection and research and it means training at work, some kind of couching led by the project group. We agree learning at work and with one’s own activity, based on cooperative learning and reflection through research is the most efficient way of learning. Education at school and at the university as well as the presentation of the results of the study is an example of active, cooperative learning and it develops partnerships among various institutions. A designed, tested, and evaluated programme of active learning for leadership teams in the area of entrepreneurial competences will be a good starting point for educational policy to also design other, similar programmes.
Implementation for practice in relation to project objectives is increased autonomy of head teachers and leadership teams, enhanced awareness of the significance of innovation and creativity and of other characteristics good entrepreneurs possess. Silva Matos (2014) claims there is creative fire in each human, it must, however, not be hampered by creative blocks (Morris, Kuratko and Covin, 2008, p. 143). We expect the participants in the project will accept and internalise some of the entrepreneurial features such as dedication or passion to work, overcoming fear (Matos, 2014), a positive view of the future, the importance of ethics (Thematic Working Group..., 2014), etc. For practice participation in the project is also an example of linking work, learning, and research. The school leadership teams that have been formed will have opportunities to critically reflect their functioning and thus to build and grow. They will be able to become an example of a learning core, which hopefully will exert a positive influence on the learning school environment.

We also highlight partnership cooperation allows cooperation not just within school, but also among schools in the country and among different countries, with the latter being significantly encouraged by international projects.
REFERENCES


• Entrepreneurial School Leadership: Literature review. Paper presenting at the EC4SLT project team meeting, Bucharest, March (2015). Newcastle: Research Centre for Learning and Teaching, Newcastle University.


The future of jobs
Employment, Skills and Workforce Strategy for the
Fourth Industrial Revolution

THE WORLD ECONOMIC FORUM
Changes to business models will have a profound impact on the employment landscape over the coming years. Many of the major drivers of transformation currently affecting global industries are expected to have a significant impact on jobs, ranging from significant job creation to job displacement, and from heightened labour productivity to widening skills gaps. In many industries and countries, the most in-demand occupations or specialties did not exist 10 or even five years ago, and the pace of change is set to accelerate. By one popular estimate, 65% of children entering primary school today will ultimately end up working in completely new job types that don’t yet exist. In such a rapidly evolving employment landscape, the ability to anticipate and prepare for future skills requirements, job content and the aggregate effect on employment is increasingly critical for businesses, governments and individuals in order to fully seize the opportunities presented by these trends—and to mitigate undesirable outcomes.

The World Economic Forum’s Future of Jobs Report seeks to understand the current and future impact of key evolutions on employment levels, skill sets and recruitment patterns in different industries and countries. It does so by asking the Chief Human Resources Officers (CHROs) of today’s largest employers to imagine how jobs in their industry will change up to the year 2020.

**DRivers of change**

We are today at the beginning of a Fourth Industrial Revolution. Developments in previously disjointed fields such as artificial intelligence and machine learning, robotics, nanotechnology, 3D printing and genetics and biotechnology are all building on and amplifying one another. Smart systems—homes, factories, farms, grids or entire cities—will help tackle problems ranging from supply chain management to climate change. Concurrent to this technological revolution
are a set of broader socioeconomic, geopolitical and demographic developments, with nearly equivalent impact to the technological factors. We also find that on average respondents expect that the impact for nearly all drivers will occur within the next 5 years, highlighting the urgency for adaptive action today.

EMPLOYMENT TRENDS
The global workforce is expected to experience significant churn between job families and functions. Across the countries covered by the Report, current trends could lead to a net employment impact of more than 5.1 million jobs lost to disruptive labour market changes over the period 2015–2020, with a total loss of 7.1 million jobs—two thirds of which are concentrated in routine white collar office functions, such as Office and Administrative roles—and a total gain of 2

Methodology
The Future of Jobs Report’s research framework has been shaped and developed in collaboration with the Global Agenda Council on the Future of Jobs and the Global Agenda Council on Gender Parity, including leading experts from academia, international organizations, professional service firms and the heads of human resources of major organizations. Our analysis groups job functions into specific occupations and broader job families, based on a streamlined version of the O*NET labour market information system used by researchers worldwide. The dataset that forms the basis of the Reports the result of an extensive survey of CHROs and other senior talent and strategy executives from a total of 371 leading global employers, representing more than 13 million employees across 9 broad industry sectors in 15 major developed and emerging economies and regional economic areas.
million jobs, in Computer and Mathematical and Architecture and Engineering related fields. Manufacturing and Production roles are also expected to see a further bottoming out but are also anticipated to have relatively good potential for upskilling, redeployment and productivity enhancement through technology rather than pure substitution.

New and Emerging Roles
Our research also explicitly asked respondents about new and emerging job categories and functions that they expect to become critically important to their industry by the year 2020. Two job types stand out due to the frequency and consistency with which they were mentioned across practically all industries and geographies. The first are data analysts, which companies expect will help them make sense and derive insights from the torrent of data generated by technological disruptions. The second are specialized sales representatives, as practically every industry will need to become skilled in commercializing and explaining their offerings to business or government clients and consumers, either due to the innovative technical nature of the products themselves or due to new client targets with which the company is not yet familiar, or both. A particular need is also seen in industries as varied as Energy and Media, Entertainment and Information for a new type of senior manager who will successfully steer companies through the upcoming change and disruption.

Changes in Ease of Recruitment
Given the overall disruption industries are experiencing, it is not surprising that, with current trends, competition for talent in in-demand job families such as Computer and Mathematical and Architecture and Engineering and other strategic and specialist roles will be fierce, and finding efficient ways of securing a solid talent pipeline a priority
Drivers of change, industries overall
Share of respondents rating driver as top trend, %

**DEMOGRAPHIC AND SOCIO-ECONOMIC**
- Changing nature of work, flexible work: 44%
- Middle class in emerging markets: 23%
- Climate change, natural resources: 23%
- Geopolitical volatility: 21%
- Consumer ethics, privacy issues: 16%
- Longevity, ageing societies: 14%
- Young demographics in emerging markets: 13%
- Women’s economic power, aspirations: 12%
- Rapid urbanization: 8%

**TECHNOLOGICAL**
- Mobile internet, cloud technology: 34%
- Processing power, Big Data: 26%
- New energy supplies and technologies: 22%
- Internet of Things: 14%
- Sharing economy, crowdsourcing: 12%
- Robotics, autonomous transport: 9%
- Artificial intelligence: 7%
- Adv. manufacturing, 3D printing: 6%
- Adv. materials, biotechnology: 6%

Note: Names of drivers have been abbreviated to ensure legibility.
Timeframe to impact industries, business models

Impact felt already
- Rising geopolitical volatility
- Mobile internet and cloud technology
- Advances in computing power and Big Data
- Crowdsourcing, the sharing economy and peer-to-peer platforms
- Rise of the middle class in emerging markets
- Young demographics in emerging markets
- Rapid urbanization
- Changing work environments and flexible working arrangements
- Climate change, natural resource constraints and the transition to a greener economy

2015–2017
- New energy supplies and technologies
- The Internet of Things
- Advanced manufacturing and 3D printing
- Longevity and ageing societies
- New consumer concerns about ethical and privacy issues
- Women’s rising aspirations and economic power

2018–2020
- Advanced robotics and autonomous transport
- Artificial intelligence and machine learning
- Advanced materials, biotechnology and genomics

Net employment outlook by job family, 2015–2020
Employees (thousands, all focus countries)

- Office and Administrative
  -4,759
  -492
  Business and Financial Operations

- Manufacturing and Production
  -1,609
  +416
  Management

- Construction and Extraction
  -497
  +405
  Computer and Mathematical

- Arts, Design, Entertainment, Sports and Media
  -151
  +339
  Architecture and Engineering

- Legal
  -109
  +303
  Sales and Related

- Installation and Maintenance
  -40
  +66
  Education and Training
for virtually every industry. Most of these roles across industries, countries and job families are already perceived as hard to recruit for currently and—with few exceptions—the situation is expected to worsen significantly over the 2015-2020 period.

**SKILLS STABILITY**

In this new environment, business model change often translates to skill set disruption almost simultaneously and with only a minimal time lag. Our respondents report that a tangible impact of many of these disruptions on the adequacy of employees’ existing skill sets can already be felt in a wide range of jobs and industries today. Given the rapid pace of change, business model disruptions are resulting in a near-simultaneous impact on skill sets for both current and emerging jobs across industries. If skills demand is evolving rapidly at an aggregate industry level, the degree of changing skills requirements within individual job families and occupations is even more pronounced. Even jobs that will shrink in number are simultaneously undergoing change in the skill sets required to do them. Across nearly all industries, the impact of technological and other changes is shortening the shelf-life of employees’ existing skill sets. For example, technological disruptions such as robotics and machine learning—rather than completely replacing existing occupations and job categories—are likely to substitute specific tasks previously carried out as part of these jobs, freeing workers up to focus on new tasks and leading to rapidly changing core skill sets in these occupations. Even those jobs that are less directly affected by technological change and have a largely stable employment outlook—say, marketing or supply chain professionals targeting a new demographic in an emerging market—may require very different skill sets just a few years from now as the ecosystems within which they operate change. On average, by 2020, more than a third of the desired core skill sets of most occupations will be comprised of skills that are not yet considered crucial to the
job today, according to our respondents. Overall, social skills—such as persuasion, emotional intelligence and teaching others—will be in higher demand across industries than narrow technical skills, such as programming or equipment operation and control. In essence, technical skills will need to be supplemented with strong social and collaboration skills.

Several industries may find themselves in a scenario of positive employment demand for hard-to-recruit specialist occupations with simultaneous skills instability across many existing roles. For example, the Mobility industries expect employment growth accompanied by a situation where nearly 40% of the skills required by key jobs in the industry are not yet part of the core skill set of these functions today. At the same time, workers in lower skilled roles, particularly in

### Skills Stability, 2015–2020, industries overall

<table>
<thead>
<tr>
<th>Industry group</th>
<th>Unstable</th>
<th>Stable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Industries Overall</td>
<td>35%</td>
<td>65%</td>
</tr>
<tr>
<td>Media, Entertainment and Information</td>
<td>27%</td>
<td>73%</td>
</tr>
<tr>
<td>Consumer</td>
<td>30%</td>
<td>71%</td>
</tr>
<tr>
<td>Healthcare</td>
<td>29%</td>
<td>71%</td>
</tr>
<tr>
<td>Energy</td>
<td>30%</td>
<td>70%</td>
</tr>
<tr>
<td>Professional Services</td>
<td>33%</td>
<td>67%</td>
</tr>
<tr>
<td>Information and Communication Technology</td>
<td>35%</td>
<td>65%</td>
</tr>
<tr>
<td>Mobility</td>
<td>39%</td>
<td>61%</td>
</tr>
<tr>
<td>Basic and Infrastructure</td>
<td>42%</td>
<td>58%</td>
</tr>
<tr>
<td>Financial Services &amp; Investors</td>
<td>43%</td>
<td>57%</td>
</tr>
</tbody>
</table>

Expected change in ease of recruitment, 2015–2020
Perception rating on a −2 ("very hard") to +2 ("very easy") scale

**INDUSTRIES**

<table>
<thead>
<tr>
<th>Industry</th>
<th>Average ease of recruitment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic and Infrastructure</td>
<td>-0.55</td>
</tr>
<tr>
<td>Consumer</td>
<td>-0.83</td>
</tr>
<tr>
<td>Energy</td>
<td>-0.14</td>
</tr>
<tr>
<td>Financial Services &amp; Investors</td>
<td>-0.34</td>
</tr>
<tr>
<td>Healthcare</td>
<td>-0.5</td>
</tr>
<tr>
<td>Information and Communication Technology</td>
<td>-0.54</td>
</tr>
<tr>
<td>Media, Entertainment and Information</td>
<td>-0.63</td>
</tr>
<tr>
<td>Mobility</td>
<td>-0.42</td>
</tr>
<tr>
<td>Professional Services</td>
<td>-0.49</td>
</tr>
</tbody>
</table>

**JOB FAMILIES**

<table>
<thead>
<tr>
<th>Job Family</th>
<th>Average ease of recruitment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Architecture and Engineering</td>
<td>-0.44</td>
</tr>
<tr>
<td>Arts, Design, Entertainment, Sports and Media</td>
<td>-0.29</td>
</tr>
<tr>
<td>Business and Financial Operations</td>
<td>-0.70</td>
</tr>
<tr>
<td>Computer and Mathematical Extraction</td>
<td>-0.67</td>
</tr>
<tr>
<td>Construction and Installation and Maintenance</td>
<td>-0.20</td>
</tr>
<tr>
<td>Management</td>
<td>-0.34</td>
</tr>
<tr>
<td>Manufacturing and Production</td>
<td>-0.43</td>
</tr>
<tr>
<td>Life, Physical, and Social Sciences</td>
<td>-0.20</td>
</tr>
<tr>
<td>Office and Administrative Related</td>
<td>-1.00</td>
</tr>
<tr>
<td>Sales and Related</td>
<td>-0.58</td>
</tr>
</tbody>
</table>

**COUNTRY/REGION**

<table>
<thead>
<tr>
<th>Region</th>
<th>Average ease of recruitment</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASEAN</td>
<td>n/a</td>
</tr>
<tr>
<td>Australia</td>
<td>-0.44</td>
</tr>
<tr>
<td>Brazil</td>
<td>-0.50</td>
</tr>
<tr>
<td>China</td>
<td>-0.41</td>
</tr>
<tr>
<td>France</td>
<td>-0.71</td>
</tr>
<tr>
<td>GCC</td>
<td>-0.66</td>
</tr>
<tr>
<td>Germany</td>
<td>-0.65</td>
</tr>
<tr>
<td>India</td>
<td>-0.65</td>
</tr>
<tr>
<td>Italy</td>
<td>-0.65</td>
</tr>
<tr>
<td>Japan</td>
<td>-0.21</td>
</tr>
<tr>
<td>Mexico</td>
<td>-0.13</td>
</tr>
<tr>
<td>South Africa</td>
<td>-0.50</td>
</tr>
<tr>
<td>Turkey</td>
<td>-0.82</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>-0.39</td>
</tr>
<tr>
<td>United States</td>
<td>-0.85</td>
</tr>
</tbody>
</table>
Drivers of change, time to impact on employee skills
Share of respondents, %

**DEMOGRAPHIC AND SOCIO-ECONOMIC**

- Changing nature of work, flexible work
- Middle class in emerging markets
- Climate change, natural resources
- Geopolitical volatility
- Consumer ethics, privacy issues
- Longevity, ageing societies
- Young demographics in emerging markets
- Women's economic power, aspirations
- Rapid urbanization

**TECHNOLOGICAL**

- Mobile internet, cloud technology
- Processing power, Big Data
- New energy supplies and technologies
- Internet of Things
- Sharing economy, crowdsourcing
- Robotics, autonomous transport
- Artificial intelligence
- Adv. manufacturing, 3D printing
- Adv. materials, biotechnology

Note: Names of drivers have been abbreviated to ensure legibility.
the Office and Administrative and Manufacturing and Production job families, may find themselves caught up in a vicious cycle where low skills stability means they could face redundancy without significant re- and upskilling even while disruptive change may erode employers’ incentives and the business case for investing in such reskilling.

**FUTURE WORKFORCE STRATEGY**

The impact of technological, demographic and socioeconomic disruptions on business models will be felt in transformations to the employment landscape and skills requirements, resulting in substantial challenges for recruiting, training and managing talent. Not anticipating and addressing such issues in a timely manner over the coming years may come at an enormous economic and social cost for businesses, individuals and economies and societies as a whole.

The Report finds that business leaders are aware of these looming challenges but have been slow to act decisively. Just over two thirds of our respondents believe that future workforce planning and change management features as a reasonably high or very high priority on the agenda of their company’s or organization’s senior leadership. However, many of the respondents are also acutely aware of the limitations to their current planning for disruptive change and its implications for the talent landscape. Currently, only 53% of CHROs surveyed are reasonably or highly confident regarding the adequacy of their organization’s future workforce strategy to prepare for these shifts. The main perceived barriers to a more decisive approach include a lack of understanding of the disruptive changes ahead, resource constraints and short term profitability pressures and lack of alignment between workforce strategies and firms’ innovation strategies. Across all industries, about two thirds of our respondents report intentions to invest in the reskilling of current employees as part of their change management and future
workforce planning efforts, making it by far the highest-ranked such strategy overall. However, companies that report both that they are confident in the adequacy of their workforce strategy and that these issues are perceived as a priority by their top management are nearly 50% more likely to plan to invest in reskilling than companies who do not. This group of companies is also more than twice as likely to be targeting female talent and minority talent and over 50% more likely to be supporting employees’ mobility and job rotation within the firm. They are significantly less likely to plan to hire more short-term workers or to use expatriate talent. A number of promising approaches appear underutilized across almost all industries. For example, a focus on making better use of the accumulated experience of older employees and building an ageless workforce barely register among proposed workforce strategies. There also seems to be varying openness to collaboration, whether within or across industries, with the latter seemingly much more acceptable. Finally, a key approach, partnerships with public institutions and the education sector, is only reported by 20% of respondents.

RECOMMENDATIONS FOR ACTION

Recent discussions about the employment impact of disruptive change have often been polarized between those who foresee limitless opportunities in newly emerging job categories and prospects that improve workers’ productivity and liberate them from routine work, and those that foresee massive labour substitution and displacement of jobs. Both are possible. It is our actions today that will determine whether we head towards massive displacement of workers or the emergence of new opportunities. During previous industrial revolutions, it often took decades to build the training systems and labour market institutions needed to develop major new skill sets on a large scale. Given the upcoming pace and scale of disruption brought about by the Fourth Industrial Revolution, however, this is simply not
an option. Without targeted action today to manage the near-term transition and build a workforce with futureproof skills, governments will have to cope with ever-growing unemployment and inequality, and businesses with a shrinking consumer base. Moreover, these efforts are necessary not just to mitigate the risks of the profound shifts underway but also to capitalize on the opportunities presented by the Fourth Industrial Revolution. The talent to manage, shape and lead the changes underway will be in short supply unless we take action today to develop it. For a talent revolution to take place, governments and businesses will need to profoundly change their approach to education, skills and employment, and their approach to working with each other. Businesses will need to put talent development and future workforce strategy front and centre to their growth. Firms can no longer be passive consumers of ready-made human capital. They require a new mindset to meet their talent needs and to optimize social outcomes. Governments will need to re-consider fundamentally the education models of today. As the issue becomes...
### Significance of barriers to change, industries overall

<table>
<thead>
<tr>
<th>Barriers</th>
<th>Share of respondents reporting barrier, %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insufficient understanding of disruptive changes</td>
<td>51%</td>
</tr>
<tr>
<td>Resource constraints</td>
<td>50%</td>
</tr>
<tr>
<td>Pressure from shareholders, short-term profitability</td>
<td>42%</td>
</tr>
<tr>
<td>Workforce strategy not aligned to innovation strategy</td>
<td>37%</td>
</tr>
<tr>
<td>Insufficient priority by top management</td>
<td>21%</td>
</tr>
<tr>
<td>Don’t know</td>
<td>16%</td>
</tr>
<tr>
<td>Insufficient priority by line management</td>
<td>18%</td>
</tr>
<tr>
<td>No barriers</td>
<td>8%</td>
</tr>
</tbody>
</table>

Note: Names of barriers have been abbreviated to ensure legibility.

### Future workforce strategies, industries overall

<table>
<thead>
<tr>
<th>Strategies</th>
<th>Share of respondents pursuing strategy, %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Invest in reskilling current employees</td>
<td>65%</td>
</tr>
<tr>
<td>Support mobility and job rotation</td>
<td>39%</td>
</tr>
<tr>
<td>Collaborate, educational institutions</td>
<td>26%</td>
</tr>
<tr>
<td>Target female talent</td>
<td>25%</td>
</tr>
<tr>
<td>Attract foreign talent</td>
<td>22%</td>
</tr>
<tr>
<td>Offer apprenticeships</td>
<td>22%</td>
</tr>
<tr>
<td>Collaborate, other companies across industries</td>
<td>14%</td>
</tr>
<tr>
<td>Collaborate, other companies in industry</td>
<td>12%</td>
</tr>
<tr>
<td>Target minorities’ talent</td>
<td>12%</td>
</tr>
<tr>
<td>Hire more short-term workers</td>
<td>11%</td>
</tr>
</tbody>
</table>

Note: Names of strategies have been abbreviated to ensure legibility.
more urgent, governments will need to show bolder leadership in putting through the curricula and labour market regulation changes that are already decades overdue in some economies. While it is clear from our data that momentous change is underway across the board, these forecasts vary in nature in different industries and regions. Efforts aimed at closing skills gaps will increasingly need to be grounded in a solid understanding of a country’s or industry’s skills base today and of changing future skills requirements due to disruptive change. For example, efforts to place unemployed youth in apprenticeships in certain job categories through targeted skills training may be self-defeating if skills requirements in that job category are likely to be drastically different in just a few years’ time. Indeed, in some cases such efforts may be more successful if they base their models on future expectations. It is therefore critical that broader and longer term changes to basic and lifelong education systems are complemented with specific, urgent and focused reskilling efforts in each industry. This entails several major changes in how business views and manages talent, both immediately and in the longer term. In particular, the Future of Jobs Report finds that there are four areas with short term implications and three that are critical for long term resilience.

**IMMEDIATE FOCUS**

- **Reinventing the HR Function:** As business leaders begin to consider proactive adaptation to the new talent landscape, they need to manage skills disruption as an urgent concern. What this requires is an HR function that is rapidly becoming more strategic and has a seat at the table—one that employs new kinds of analytical tools to spot talent trends and skills gaps, and provides insights that can help organizations align their business, innovation and talent management strategies to maximize available opportunities to capitalize on transformational trends.
• **Making Use of Data Analytics**: Businesses and governments will need to build a new approach to workforce planning and talent management, where better forecasting data and planning metrics will need to be central. To support such efforts, the Forum’s Future of Jobs project provides in-depth analysis on industries, countries, occupations and skills.

• **Talent diversity—no more excuses**: As study after study demonstrates the business benefits of workforce diversity and companies expect finding talent for many key specialist roles to become much more difficult by 2020, it is time for a fundamental change in how talent diversity issues perceived and well-known barriers tackled. In this area, too, technology and data analytics may become a useful tool for advancing workforce parity, whether by facilitating objective assessment, identifying unconscious biases in job ads and recruitment processes or even by using wearable technologies to understand workplace behaviours and encourage systemic change.

• **Leveraging flexible working arrangements and online talent platforms**: As physical and organizational boundaries are becoming increasingly blurred, organizations are going to have to become significantly more agile in the way they think about managing people’s work and about the workforce as a whole. Businesses will increasingly connect and collaborate remotely with freelancers and independent professionals through digital talent platforms. Modern forms of association such as digital freelancers’ unions and updated labour market regulations will increasingly begin to emerge to complement these new organizational models.

**LONGER TERM FOCUS**

• **Rethinking education systems**: Most existing education systems at all levels provide highly siloed training and continue a number of 20th century practices that are hindering progress on today’s talent and labour market issues. Two such legacy issues burdening
formal education systems worldwide are the dichotomy between Humanities and Sciences and applied and pure training, on the one hand, and the prestige premium attached to tertiary-certified forms of education—rather than the actual content of learning—on the other hand. Businesses should work closely with governments, education providers and others to imagine what a true 21st century curriculum might look like.

• **Incentivizing lifelong learning**: The dwindling future population share of today’s youth cohort in any ageing economies implies that simply reforming current education systems to better equip today’s students to meet future skills requirements—as worthwhile and daunting as that task is—is not going to be enough to remain competitive. Ageing countries won’t just need lifelong learning—they will need wholesale reskilling of existing workforces throughout their lifecycle. Governments and businesses have many opportunities to collaborate more to ensure that individuals have the time, motivation and means to seek retraining opportunities.

• **Cross-industry and public-private collaboration**: Given the complexity of the change management needed, businesses will need to realize that collaboration on talent issues, rather than competition, is no longer a nice-to-have but rather a necessary strategy. Multi-sector partnerships and collaboration, when they leverage the expertise of each partner in a complementary manner, are indispensable components of implementing scalable solutions to jobs and skills challenges. There is thus a need for bolder leadership and strategic action within companies and within and across industries, including partnerships with public institutions and the education sector. These efforts will need to be complemented by policy reform on the part of governments. As a core component of the World Economic Forum’s Global Challenge Initiative on Employment, Skills and Human Capital, the Future of Jobs project aims to bring specificity to the upcoming disruptions to the employment and skills landscape in industries and
regions—and to stimulate deeper thinking and targeted action from business and governments to manage this change. The 2020 focus of the Report was chosen so as to be far enough into the future for many of today’s expected trends and disruptions to have begun taking hold, yet close enough to consider adaptive action today, rather than merely speculate on future risks and opportunities. The industry analysis presented in the Report will form the basis of dialogue with industry leaders to address industry-specific talent challenges, while the country and regional analysis presented in this Report will be integrated into national and regional public-private collaborations to promote employment and skills.
European School Heads Association