



Edition 19, October 2013

Premier e-skills  
research event

## The Case Study Methodology Workshop

See p1 for more information and the invitation.

case study  
methodology



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innovative  
responsive  
developmental  
enabler  
collaborative

## Building e-skills research capacity – the case study methodology

Uniting around a common pillar to fight poverty and inequality, creating an inclusive economy, building capabilities, a capable developmental state and leadership throughout society to work together to solve problems

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As part of the e-skills agenda, the Institute responsible for e-skills human resource capacity development is building e-skills research capacity within South Africa. The case study methodology is internationally-recognised and the Institute views it as an effective way forward.

Dr Gandon Gill, a leading expert on the case study methodology, has been engaged to assist with the process of upskilling those involved in capacity building for an emerging socio-economic environment increasingly impacted by modern ICT.

### The case study methodology approach

The case study methodology, or Case Method, is an approach to education and research developed by Dr Gill. It is a practical and highly-relevant means of assessing complex real-life situations and developing growth strategies.

The method has been lauded because of the way it connects researchers to practice and fosters active learning. (Learning is through in-depth observations in a field setting.) It is also viewed as an excellent method to relate different disciplines and to integrate research and education.

As Dr Gill explains in his book, 'Informing with the Case Method – a guide to case method research, writing and facilitation': "In the classroom, this translates to employing pedagogy that revolves around the discussion of these examples. In research, it implies an emphasis on insights drawn from a small number of deeply understood situations in preference to inductions based upon a large number of less detailed observations."

The Case Method is exploratory, comprehensive, integrative and participative. The focus is on decisions and problems where the emphasis is on distinguishing 'better' and 'worse'. There is no correct answer as such. The paradigm of the Case Method is constructivist.

## Premier e-skills research event

### Invitation to attend the Case Study Methodology Workshop

The case study methodology has great relevance in helping South Africa maximise the benefits that modern ICT devices and applications can bring to business, education and service delivery, as well as delivering on the pillars and aims of the National Development Plan – Vision 2030.

The Institute responsible for e-skills human resource capacity development will be hosting a four-day Case Study Methodology Workshop in Strand, Cape Town, from 21-24 January 2014. This is in collaboration with the Informing Science Institute.

Dr T Grandon Gill, a professor in the Information and Decision Sciences, College of Business Department at the University of South Florida (USF) in the USA, will be the lead facilitator. Dr Gill, the leading figure in the Case Method or case study methodology, has conducted numerous high-level training courses, including with the United Nations and governments in Germany and Vietnam.

### Join the case study discussion

**Who?** The Institute is calling for expressions of interest from senior managers in government, business, education and civil society to participate in this training workshop. The workshop which will lay the framework to develop work-based case studies for policy development, implementation, evaluation, teaching, research and publication.

**When and where?** 21-24 January 2014 at the Strand in Cape Town.

**Applying?** Interested parties should apply to [info-esi@doc.gov.za](mailto:info-esi@doc.gov.za), outlining their current position, responsibilities and scoping a potential 'real life' case study that can be applied in a work-based or community setting.

Places are limited for this introductory workshop. Invitations will be issued based on the alignment of the proposed case study effort to capacity building for an emerging socio-economic environment increasingly impacted by modern ICT.

**Cost?** Costs for this initial high-quality training have been kept to a minimum of R2 800 for a four-day course.

## [continued] Building capacity within research – the case study methodology

*Dr Gandon Gill will be facilitating The Case Study Methodology Workshop hosted by the Institute.*



### Dr Gandon Gill

Dr Gill completed his MBA and DBA at Harvard Business School (HBS) and his undergraduate degree at Harvard College. His research focus is 'Informing Science', an area that covers a multi-disciplinary approach to the use of modern ICT for local benefit.

Dr Gill is a Governor and Fellow of the Informing Science Institute. He also currently serves as Editor-in-Chief of 'Informing Science: The International Journal of an Emerging Transdiscipline'. He has over 100 publications, including refereed journal articles, case studies and four books. His book 'Informing with the Case Method' (2011) is a seminal publication on the case study methodology.

Dr Gill has wide experience in delivering case study methodology workshops internationally, including in Germany, Vietnam and Italy. His teaching focus is the Case Method (or case study methodology). He wrote his first case study for HBS nearly 30 years ago and has continued to develop dozens of cases since that time, currently acting as Editor-in-Chief of 'The Journal of IT Education: Discussion Cases'.

Currently, Dr Gill teaches capstone courses built around case discussions in USF's undergraduate MIS major, MS-MIS and Executive MBA programmes. **END**

## Invitation to participate: Provincial consultations on the ICT Policy Green Paper

The Department of Communications (DoC) is **calling on stakeholders to be involved in the public consultation on the ICT Policy Green Paper**. This includes ordinary citizens, the private sector, advocacy groups, civil society and other stakeholders.

The document will be gazetted for public consultation in November 2013. There will also be public engagement events at various venues around the country through November and December 2013. Following are the dates and the exact venues will be confirmed in due course.

Province	Area	Date
North-West	Rustenburg	19 November 2013
Mpumalanga	Nelspruit	21 November 2013
Eastern Cape	Port Elizabeth	26 November 2013
Western Cape	Cape Town	28 November 2013
Limpopo	Polokwane	3 December 2013
KwaZulu-Natal	eThekhwini	5 December 2013
Free State	Bloemfontein	10 December 2013
Northern Cape	Kimberley	12 December 2013
Gauteng	To be confirmed	March 2014 Colloquium

## Calling for e-skills stakeholder participation

The inputs received from these public engagements will be used to inform the drafting of a coherent policy and regulatory framework that supports overall national policy goals.

### Background

The DoC has commenced the process of reviewing all ICT policies, which will inform the development of an integrated national ICT Law. This is in support of the National Development Plan which indicates the need for a full ICT policy review as part of enabling an ICT reality for South Africa by 2030.

A 22-member ICT Policy Review Panel, which serves as an advisory body, is working closely with the DoC to produce this work. They are tasked with, among others actions, recommending the best policy, legislative and regulatory environment which reflects convergence of the sector and promotes the 2030 vision of a South Africa that is dynamic, has a vibrant knowledge economy and an information society that is more inclusive and prosperous.

Following this ICT policy review, the DoC will develop a more comprehensive and integrated e-strategy that reflects the cross-cutting nature of the ICT sector. **END**

## Enabling SA youth participation in a knowledge-based economy

Uniting around a common pillar to fight poverty and inequality, creating an inclusive economy, building capabilities, a capable developmental state and leadership throughout society to work together to solve problems

This is the information age and South Africa is part of a global, knowledge-based economy. There are various areas that need to be dealt with to ensure South Africa's participation and prosperity.

A core area is equipping young people with the necessary e-skills and tools. Furthermore, efforts need to be intensified to increase the representation of women, especially young women, in the ICT sector. It is about inclusivity within a knowledge-based economy – ensuring that the youth, women and those in rural and underprivileged areas are enabled to reduce the technology divide and to foster development.

Technology advances have essentially changed the way we live, work, learn and interact. Those countries who have positioned themselves to increase the adoption of technology will be in a pole position to seize opportunities and advance their growth and development strategies.

On 23 October 2013, the Institute responsible for e-skills human resource capacity development was part of a panel discussion on 'Enabling SA youth participation in a knowledge-based economy' at GovTech 2013.

The public sector ICT event was held from 20-23 October 2013 in Cape Town. The theme was 'Innovation - Technology for 21st Century Government'.

The article looks at some of the core issues that are part of the 'youth participation in a knowledge economy' conversation.

### Using a collaborative approach

To date, South Africa's approach to developing the ICT sector and creating a skilled society capable of leveraging technology for the benefit of society at large has not achieved the desired outcomes. As things stand, South Africa has dropped from 47th (2007) to 72nd place (2012) in the World Economic Forum's global e-readiness rankings.

A collaborative effort by all stakeholders is needed to move the country forward – as a way to prevent silos and to reduce duplicating effort and resources.

The need for a nationally, provincially and locally coordinated approach towards building the required human capacity for the country cannot be underestimated. Investments made at various levels – but without coordination – do not deliver impact.



*The Institute responsible for e-skills human resource capacity development was part of a panel discussion on 'Enabling SA youth participation in a knowledge-based economy' at GovTech 2013.*

It is more than just partnerships. It's about building a credible architecture for all stakeholders to participate and own the agenda, where there is direct impact on national strategies and where the focus is on innovation. Another important element is an aggregation framework that measures impact.

The Institute has created a multi-stakeholder collaborative network architecture for these purposes.

### Policy, education and cost of broadband

South Africa's ICT strategy must be aligned with the country's growth and development strategy. ICT impacts across the board and policy makers need to take this major shift into account.

For example, the education system must be improved to develop skills and competencies required to function optimally in a knowledge-based economy. This needs to occur with the early adoption of technology in the education system.

It will enable young people to evolve from being consumers of technology to becoming producers of technology. The economic impact of this is significant. Producers of technology, incentivised to develop local solutions, will reduce the importing of technology solutions.

Government needs to set appropriate policies and create a conducive environment for South Africa to participate meaningfully in the global knowledge society. This includes increased investments in R&D, e-skills and infrastructure. However, the cost of broadband prohibits the creation of a vibrant and inclusive knowledge-based economy. Broadband costs must be lowered.

## [continued] Enabling SA youth participation in a knowledge-based economy

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### Towards innovation

Innovation does not take place in a vacuum. One of the areas – a base point – is access to the ICT universe. But it is no longer enough to know how to use a device. Youth need to be provided with opportunities to understand how to create new knowledge through the use of ICTs.

E-astuteness is about knowing how to use technology and e-skills in a smart way as part of life, for individual and community benefit. It moves beyond e-literacy. South Africa needs to deliver e-astute youth on a large scale. It is a critical shift that requires all stakeholders – government, business and civil society – to engage.

### Creating an enabling environment

The Department of Communications is currently reviewing the ICT policy for the country aiming to create a vibrant ICT sector. The Institute advocates building the required skills and e-astuteness among South Africa's citizenry (and youth) and that innovative policies are in place to stimulate the diffusion and adoption of ICTs.

A multi-pronged approach is needed over and above an aggressive ICT agenda if South Africa is to deliver the appropriately-skilled youth by 2030. ICT is pervasive and impacts on almost all areas of life. This means moving beyond an ICT policy focus and looking across the government service platform and its policies.

The youth should also be more involved in ICT policies and strategy development. This is an area that requires enhancement and the Institute is engaging key stakeholders to promote the development of e-leaders among the youth through international exchange programmes and local initiatives. However, there is still much to be done.

### Informal education, e-skills and the technology divide

While it's essential to embed e-skills within the formal education system, it is as important to look at the NEETs. (A NEET is a young person who is 'Not in Education, Employment or Training'.) Mobile technology is already in the NEET space. There needs to be a coherent approach to harness the available technology (such as cell phones).

It is informal learning that underpins most of the technology use. One of the solutions is to focus on informal learning as a pathway to formal learning, as well as an end in itself. Otherwise there will be little progress in dealing with inequity in a world increasingly dominated by modern ICT devices.

### Inclusivity

Creating an inclusive information society means ensuring that young people in rural and underprivileged areas benefit from the advances in ICTs. The Institute has started

creating platforms for new opportunities, innovation and to build e-astuteness. These include innovation application factories attached to the provincial CoLabs.

However, to further ensure inclusivity, plans are currently in process to develop smart community


knowledge production centres across the country, targeting peri-urban, rural and deep rural areas. The smart centres will not only be places to access ICT but hubs to develop e-skills, e-astuteness and entrepreneurship.

### Youth and entrepreneurship

There is a need to reposition the current approaches to SMME development as experience has shown that funding alone is not the answer. More evidence-based research in this area will assist to help redirect SMME development for new job markets such as the Creative New Media Industries.

South Africa needs to encourage the youth to become cyberpreneurs and appreneurs and current SMME owners also need to be cyberskilled. Due to the pervasive nature of ICT, the future of successful entrepreneurship lies within the ICT and e-skills framework.

### Developing tomorrow's leaders

Fast tracking ICT development is an important part of developing tomorrow's leaders. To operate in the global economy and to be competitive, youth need to move beyond e-literacy. South Africa needs to build e-astute citizens – young people that have the know-how to use technology and e-skills in a smart way as part of life, for their benefit and for the benefit of their community. 

**“...youth need to move beyond e-literacy. South Africa needs to build e-astute citizens – young people that have the know how to use technology and e-skills in a smart way as part of life, for their benefit and for the benefit of their community”**

### Benefits of knowledge economy

The following are some of the benefits of an inclusive knowledge-based economy:

- Better informed and educated citizens
- Job creation
- Ability for South Africa to compete effectively in the global economy
- Highly skilled workforce
- Efficient use of resources through automation
- Increased productivity in all sectors of the economy
- Increased rollout of e-government services
- Increased innovation

## SA's standing in the information society

Uniting around a common pillar to fight poverty and inequality, active citizenry, an inclusive economy, building capabilities and a capable developmental state

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South Africa has been placed 84 out of 157 countries in the International Telecommunication Union's (ITU) ICT Development Index. This was part of the ITU's 'Measuring the Information Society 2013' report released in October 2013. The document provides international ICT performance evaluation based on quantitative indicators and benchmarks.

The report notes that there is a clear link between income and ICT progress and that ICT can have a significant impact on areas such as health, education and employment. ICT, and more importantly the knowledge of how to use ICT effectively, can change South Africa, driving wealth equity and global competitiveness. South Africa cannot ignore ICT development and this area needs to be further expanded.

### The ICT Development Index and e-skills

The ICT Development Index (IDI) combines 11 indicators into one benchmark measure for monitoring and comparing

*Portion of Table 2.2: ICT Development Index (IDI), 2011 and 2012. For the full table, see the ITU's 'Measuring the Information Society 2013' report.*

Economy	Rank 2012	IDI 2012	Rank 2011	IDI 2011
Albania	80	4.11	80	3.80
Ecuador	81	4.08	83	3.73
Fiji	82	3.99	81	3.79
Mexico	83	3.95	82	3.78
South Africa	84	3.95	85	3.67
Mongolia	85	3.92	90	3.59
Egypt	86	3.85	87	3.65
Suriname	87	3.84	84	3.73
Viet Nam	88	3.80	86	3.65
Morocco	89	3.79	89	3.59
Iran (I.R.)	90	3.79	88	3.61
Tunisia	91	3.70	92	3.58
Peru	92	3.68	91	3.58
Jamaica	93	3.68	93	3.54
Dominican Rep.	94	3.58	95	3.36
Thailand	95	3.54	94	3.42
Cape Verde	96	3.53	96	3.18
Indonesia	97	3.43	97	3.14
Philippines	98	3.34	98	3.14
Bolivia	99	3.28	102	3.08
El Salvador	100	3.25	103	3.06
Tonga	101	3.23	101	3.09
Syria	102	3.22	99	3.13
Paraguay	103	3.21	100	3.10
Uzbekistan	104	3.12	104	3.02
Guyana	105	3.08	106	2.96
Algeria	106	3.07	105	2.98
Sri Lanka	107	3.06	107	2.92
Botswana	108	3.00	108	2.83
Namibia	109	2.85	111	2.60
Honduras	110	2.74	109	2.70
Cuba	111	2.72	110	2.66
Gabon	112	2.61	112	2.46
Ghana	113	2.60	114	2.30
Nicaragua	114	2.54	113	2.39
Zimbabwe	115	2.52	119	2.16
Kenya	116	2.46	116	2.23
Swaziland	117	2.44	115	2.27

ICT developments across countries. Countries are ranked according to their level of ICT access, ICT use and ICT skills.

The IDI values ranged from a low of 0.99 (Niger) to a high of 8.57 (Republic of Korea). A year-on-year comparison shows that nearly all countries increased their IDI values between 2011 and 2012, demonstrating that ICT levels continue to mature throughout the world.

**South Africa's placement of 84 is one up from the previous year (85)** – this is above the developing country average. Looking specifically at ICT access, South Africa was placed 85 compared to 88 in 2011. In ICT use, the country is placed at 75 compared to 81 in 2011. In ICT skills, South Africa is placed 95 which has remained consistent since 2011.

South Africa is one of the countries that stands out for having a relatively high proportion of individuals using the internet (41%), well above the developing country average of 27.5%. The country has also seen the highest increase in the proportion of individuals using the internet in the region, from 34% in 2011. The ITU report notes that the growth of mobile-broadband services in many African countries has driven this trend as it lowers the price of internet access.

**The data above indicates that a key area to focus on is that of e-skills, e-social astuteness and e-leadership.** There has been improvement in ICT access and use, however, e-skills has remained stagnant and is in the lowest position of the three areas.

The ITU report also notes that consumer uptake plays an important role. Not only do consumers impact on the development of the content industry and internet-based companies but on the development and delivery of online public services. For all of these to be truly successful, there needs to be a critical mass of potential consumers online.

**South Africans may have access to ICT and the opportunity to use it, but this use will be limited without people having e-skills and e-astuteness, and knowing how to use ICT in a smart way** that benefits the individual and the community (e-astuteness). South Africa needs to build its online consumer base.

### Mobile broadband leads the way

**The Institute has focused on mobile ICT as a route to increasing the e-skills/e-astuteness capacity within the country. This position is confirmed by the mobile ICT statistics released in the ITU report,** where mobile broadband has been the fastest growing market segment over the past few years in both developed and developing countries.

According to the ITU, subscriptions in

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developing countries have doubled over the past two years and now outnumber subscriptions in developed countries. In Africa, penetration rates will reach almost 11% by end 2013, up from 2% only three years earlier.

But the difference between developed and developing countries is significant with 75% penetration in the former compared with 20% in the latter. Another difference is that in developed countries mobile broadband is often a complement, whereas in developing countries it is a substitute to fixed-broadband services.

A comparison between households with internet access and households with computers shows that the ratio has been falling steadily. It is almost 1:1 in developed countries. In Africa, the ratio is the highest (at 1:1.5). It reflects the shift in the type of internet access devices used in households. These are no longer limited to computers but increasingly include other devices, such as smartphones.

**Price is a barrier in fixed broadband**

The uptake of fixed (wired)-broadband continues to grow but more slowly than mobile broadband. The fixed (wired)-broadband divide between developing and developed countries remains substantial.

According to the latest ITU estimates, by end 2013 fixed (wired)-broadband penetration will reach almost 10% globally, 27% in developed countries and around 6% in developing countries. In Africa, fixed (wired)-broadband penetration remains below 1%.

The ITU finds a strong link between broadband uptake and broadband affordability. As prices drop, so more people invest in broadband. A comparison of prices for fixed- and mobile-broadband services shows that, in developing countries, mobile broadband is cheaper than fixed broadband, on average. Fixed-broadband is still unaffordable for most people in developing countries.

The ITU also released data on the ICT Price Basket (IPB). This index combines fixed-telephone, mobile-cellular and fixed-broadband internet tariffs for 165 economies into one measure and ranks countries based on the 2011 tariffs, and in relation to income levels. **South Africa is ranked 107 out of 161 countries.**

**The Institute's position on pricing is consistent with that of the ITU – broadband pricing must come down to stimulate the population to access the internet.**

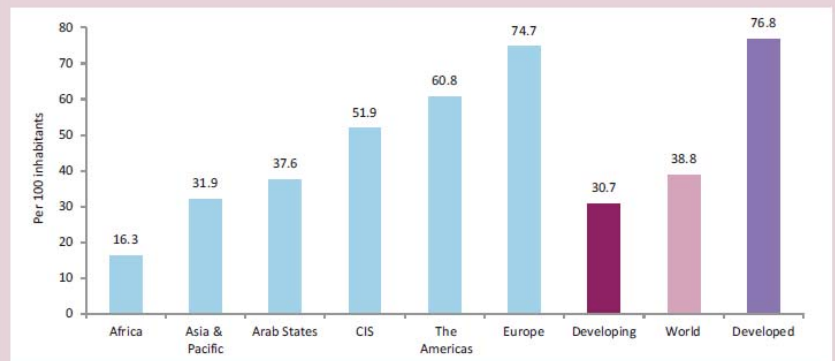
**Policy to create change**

The ITU also notes that national ICT/broadband policies can stimulate the market, expand services and bring down prices. The government policy environment plays an important role by providing an enabling environment for development of the ICT market and the deployment of broadband infrastructure.

Furthermore, ICTs are key enablers for social and economic development. Access and effective use of new technologies improves participation in new opportunities, such as those relating to employment, education, health, governance etc.

The Institute uses a multi-stakeholder collaborative

**Chart 1.13: Individuals using the Internet, by region and level of development, 2013\***



Note: \* Estimate.  
Source: ITU World Telecommunication/ICT Indicators database.

network – which includes the government – and part of the Institute's role is to advocate changes in policy to drive e-skills uptake. However, it is not just about government's role. There needs to be stronger collaboration between government, business and civil society to harness ICT. This will drive ICT development and the adoption of e-skills in the country. The challenges are too big for a single entity – collaboration is the way forward. **END**

**For more information on the ITU report,** go to [www.itu.int/net/pressoffice/press\\_releases/2013/41.aspx#.Um9fThDfhvE](http://www.itu.int/net/pressoffice/press_releases/2013/41.aspx#.Um9fThDfhvE).



**We have come a long way – celebrating 20 years of freedom**

On 27 April 2014, South Africa celebrates the 20 year anniversary of the country's first democratic elections which included South Africans of all races. Initiatives will include events, celebrations and reports from all sectors on how far South Africa has come as a country since 1994.

## Creating the base for a mobile app ecosystem

Active citizenry, building capabilities and a capable developmental state

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The Institute responsible for e-skills human resource capacity development and its provincial CoLabs are focused on developing an ecosystem for mobile applications. This serves as a platform for developing local talent and fostering entrepreneurial skills.

There needs to be more investigation into understanding the mobile apps ecosystem and the processes involved. However, it is clear that teaching, the transfer of skills, business incubation and mentoring are instrumental in the ecosystem.

### CodeJam 2013

The e-Inclusion and Social Innovation CoLab: Western Cape, based at the University of the Western Cape, recently had the prize giving for CodeJam 2013. The event was held on 11 October 2013 and this year the theme was 'Apps that matter'.

The CodeJam is a mobile apps development

competition with a focus on social innovation aimed at addressing local socio-economic challenges. It incorporates business training and mentorship, as well as mobile apps training. Business incubation and entrepreneurial training are part of the prizes.

The process also provides a collaborative platform for a diverse group of stakeholders from business, government, academia and civil society to contribute to and participate in the skills development of our local talent in the areas of social innovation and mobile technology.

The target was young people between the ages of 18- 25 (not in formal employment) from the Western Cape. Seventy eight students participated in the competition, made up of 44 men and 34 women.

Prizes were awarded in five categories (each addressing a particular socio-economic challenge) and on three mobile operating platforms: iOS, Android and Prototype. The table below shows the winners and the apps developed.

### Winners of CodeJam 2013

#### Category 1: Start-Up Companies (Sponsor: Cape Activa)

Two teams were selected as winners and will participate in the next phase of the project under the condition that they collaborate to grow the ideas.

**StartApp** is an application that helps start-ups and owners get the right information needed to survive. StartApp links the start-up with an experienced mentor.

By Chungu Mwelwa and Kalanje Kagulura.

**BusinessGraph** is a business analytics app showing the store owner how their business is doing during the day and at the end of the day. It shows the daily analysis via a graph specifically on the x,y plane. It makes it easy to see peak buying times and can be used from store to phone. Owners can use the app to predict how much money or profit they will make in future.

By Khomotjo Mohala.

#### Category 2: Employment Seekers

**Matrix Go Smart** is aimed at high school learners to help them choose the relevant subjects for their career choices. The app includes:

- Available institutions where they can study towards their career choices.
- Tertiary institutions entry requirements
- Available bursaries

By Nigel Chisinga, Neliswa Valashiya, Varoline Tah and Ntombekhaya Jolobe.

#### Category 3: Maths/Science App for learners

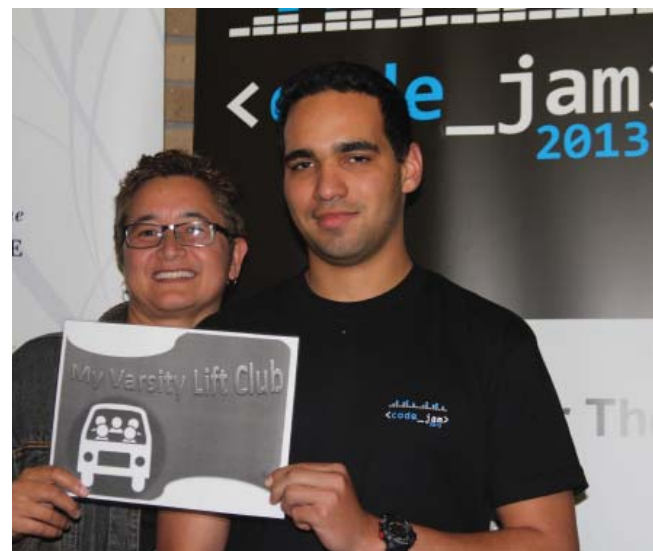
In this category, two teams submitted ideas and apps, namely One Hit Wonders and LitMa. The winner of this category is One Hit Wonders but the sponsor (UWC) also awarded a further development period to LitMa as they regarded the idea as a worthwhile app to develop.

**One Hit Wonders** helps students with questions and helps them with concepts they don't understand. It connects students with 'gurus' that can answer any questions they have. Students can post questions in specific topics, search for previously-answered questions or ask a 'guru' directly. Students can also choose preferred 'gurus' who are then notified about their questions. Students also access resources, such as textbooks and summarised sources about any topic, through the app. By Tholgelolo Mphahlele, Luke Scholtz, Andrew Muller, Darren Jody van Roodt and Reuben Claassen.

*One Hit Wonders: Maths/Science app for learners category winner and Best Android app winner*



*My Varsity Club; Transport category winner*





[continued] **Creating the base for a mobile app ecosystem**

**LitMa for Kids** is geared for children, assisting with the national educational issues children face when it comes to mathematics and literacy. The application is a gaming tool for foundation phase educators and parents and their children. It includes translations of maths and literacy into a number of South African languages.  
By Vuyiswa Nomlala, Noncedo Madubedude, Johnny Ramokhofo and Yonele Dyonase.

**Category 4: Public Service**  
Part of the prize was a further period for development.


**GREENiT** allows the user to understand why we need to save energy and water and why we need to recycle. It focuses on saving or making money by going the green route. It provides information on recycling and how to use, reuse and recycle. It connects companies, communities and households.  
By Amber Arendse, Tasneem Khan, Robin George and Lanielle Hartzenberg.

**Category 5: Transport**

**My Varsity Lift Club** is a lift club application for varsity students. A registered driver inputs his location (meeting point) and destination and other students can view this. They can then click to join by reserving a seat for themselves. This creates an informal lift club to and from campus. The application will work in real time and students looking for lifts will be able to communicate with the driver beforehand, view his intended plotted route and view the transport fee.  
By Yvonne Braaf and Stephen Cloete.

**Best platform categories**

Best Prototype: Matrix Go Smart (see information above)  
Best Android app: One Hit Wonders (see information above)  
Best iOS app: UCNF

**UCNF** is an integrated transportation app that allows the user to find the shortest and/or cheapest route from their location to a destination. The app plans the route across multiple transportation service providers, such as Metro Rail and the UCT Jamie shuttle. Currently the app targets UCT commuters, with the potential to upscale at a later stage.  
By Kurt Jacobs, Motse Lehata, Melissa Johannesson, Jarred Martin and Janet Mundilo. 

UCNF: Best iOS app winner



Stakeholders at CodeJam 2013 Prize Giving



**NDP Priority Areas supported by NeSPA 2013**

**Pillar 1:** Unite around a common pillar to fight poverty and inequality

**Pillar 2:** Active citizenry

**Pillar 3:** Inclusive economy

**Pillar 4:** Build capabilities

**Pillar 5:** A capable developmental state

**Pillar 6:** Leadership throughout society to work together to solve problems

## Modern ICT in education

Active citizenry, creating an inclusive economy and building capabilities

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Not only is ICT pervasive throughout society, but it promotes change. This can be seen in its effect on the way we work, how we handle information and the approaches we make, among many other examples. We now operate in a world of constant change.

With the global move towards knowledge economies and learning societies, it has become essential to prepare children for this new environment. There is a new global economy and it is necessary to address the future job opportunities now, even if these jobs don't exist as yet. It's about creating pipelines for future careers and industry needs.

Furthermore, with knowledge and learning as the core of economic productivity and social development in the knowledge economy, ICT has become even more critical to developing a country's economy.

A key area to address is that of ICT in education. This includes ICT in the curriculum, teacher training and innovative pedagogy to enhance learning and assessment, among other areas.

### Embedding ICT at schools

The e-Enablement of Effective Service Delivery CoLab: KwaZulu-Natal (KZN) met with the KZN Department of Education on 23 October 2013. The focus was to discuss possible future initiatives involving ICT in education.


This included educator training in technology, developing curriculum for Safe Internet use in school, developing an accommodating, coherent internet and cellphone usage policy, and organising e-learning seminars for schools educators.

The focus of the CoLab, e-enabling effective service delivery, does not only fall

### Global trends in ICT and education

- Mobile learning due to the growing ubiquity of smart phones.
- Cloud computing that allows for increased economies of scale. Although this will depend on connectivity.
- One-to-one computing where an ICT device is given to each learner, allowing for new learning environments.
- Ubiquitous learning that allows for learning opportunities anytime and anywhere. This will mean redefining the traditional lesson time, extended access to teachers, opportunities for peer-to-peer learning, and increased opportunities for self-paced learning.
- Educational gaming that offers active participation, incentives and interaction.
- Personalised learning that takes prior learning into account and then customises to address learning gaps and learning styles.
- The redefinition of learning spaces to foster collaborative, cross-disciplinary, students-centred learning. An example is learner table layout.
- Teacher-generated open content that allows for customisation.
- Smart portfolio assessment where data management related to learning assists with better understanding learning gaps, contributes to customising pedagogical approaches and allows for more frequent assessments.
- Teacher managers that are no longer the source of knowledge but facilitators who guide learners through individualised learning pathways that include collaborative learning opportunities.

*The trends are adapted from a post by Robert Hawkins, Senior Education Specialist at the World Bank with a focus on science and technology, as well as the role of technology in education.*

within the domain of what people know as e-government and putting government services online. The government provides services across all departments and this includes state-run education. The CoLab looks at service improvement such as that within the education domain. 



(L-R) Vish Eramen from Smart Schools Network; Dr Phillip Dikgomo, Director: MST & ICT at KZN Department of Education; Kavita Behara from KZN e-Skills CoLab and Colin Thakur, Director, KZN s-Skills CoLab.

## Taxonomy for e-skills

An e-skills taxonomy is more than just definitions. The e-skills agenda requires a shift in thinking with outcomes such as changes in policy. The terms used are part of creating the environment for this shift. Following are definitions to some of the words that form part of the e-skills taxonomy.

<p><b>e-Astuteness</b></p>	<p>The capacity to continuously appropriate the technology into personal work, education, business, social and family contexts for both personal and collective benefit.</p> <p>e-Astuteness is defined as a knowledgeable capacity, based on personal and interpersonal skills, that involves:</p> <ul style="list-style-type: none"> <li>• Understanding people and situations</li> <li>• Building alignment and alliances</li> <li>• An acute understanding of strategic direction</li> <li>• Applying strategic behaviour</li> </ul> <p>e-Astuteness allows individuals to take personal advantage of ICT through the appropriate e-skills in social or economic situations. (Building social connections is an example of a social situation and obtaining a job or starting a business is an example of an economic situation.)</p> <p>e-Astuteness does not necessarily depend on formal education or high levels of literacy.</p>
<p><b>e-Literacy</b></p>	<p>e-Literacy is the ability of individuals to use digital tools and facilities to perform tasks, to solve problems, to communicate, to manage information, to collaborate, to create and share content and to build knowledge, in all areas of everyday life and for work.</p>
<p><b>e-Skills</b></p>	<p>The ability to use and develop ICTs within the context of an emerging South African information society and global knowledge economy, and associated competencies that enable individuals to actively participate in a world in which ICT is a requirement for advancement in government, business, education and society in general.</p>
<p><b>e-Social astuteness</b></p>	<p>e-Social Astuteness is defined as the use of ICT and e-skills for more astute ways of people interacting with others, which include:</p> <ul style="list-style-type: none"> <li>• Social interactions</li> <li>• A level of awareness and understanding of diverse social situations</li> <li>• The various alternatives open to them for response</li> </ul> <p>e-Astuteness focuses on individual benefit whereas e-social astuteness focuses on interacting with others for group benefit.</p>

## Awareness campaign update


The Institute responsible for e-skills human resource capacity development participated in a number of events throughout October 2013.

The focus was on explaining what the Institute is doing, explaining the amalgamation and promoting upcoming courses. **The primary shift that needs to be made in stakeholders' minds, including the public, is that it is no longer about computer literacy and e-literacy but about e-astuteness.**

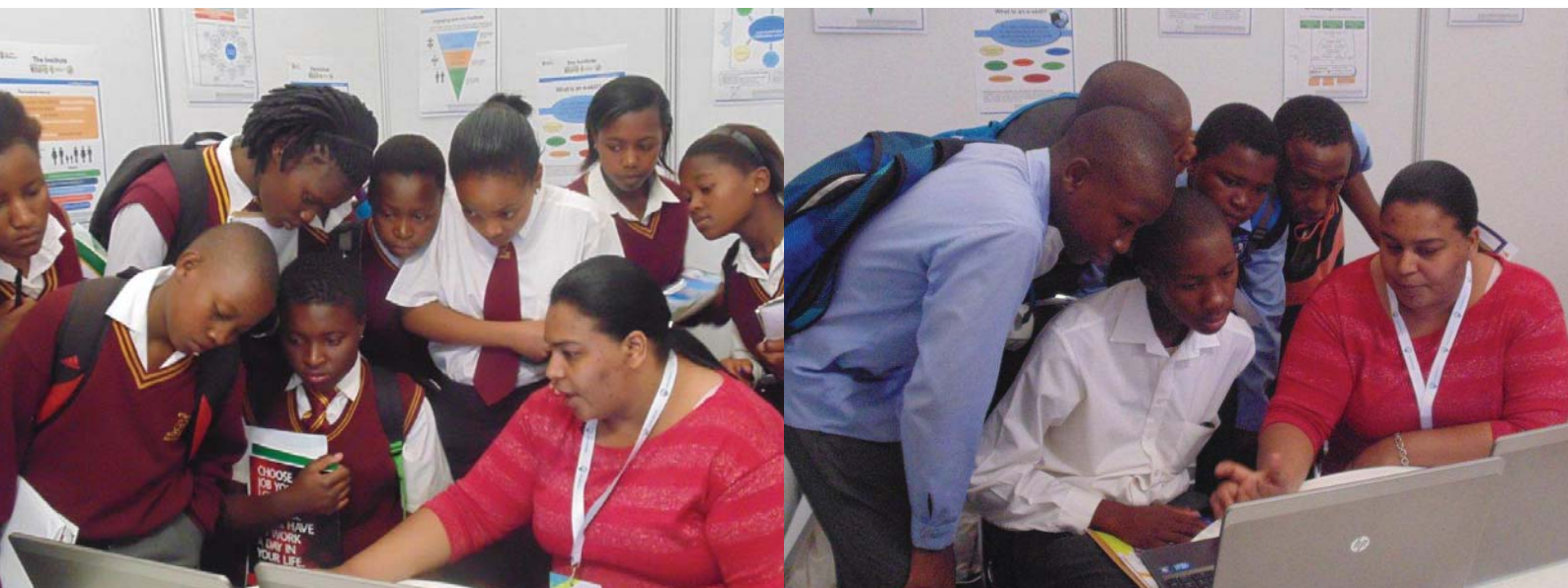
- **National Skills Conference – Career Exhibition** at the Birchwood Conference Centre, Gauteng from 10-11 October 2013. The Skills Conference is the premier event on the Department of Education's calendar, focusing on the national Skills Development Strategy III. The intention is to disseminate educational material and to promote skills development and vocational education and training. The interactive career guidance exhibition targeted Grade 9-12 learners.
- **The Inqguza Hill CSI Project Launch** at Senior Secondary School in Holly Cross, Lusikisiki, on 19 October 2013. The event included the official handover

of the OR Tambo IT centre to the school and switching on of telematics. It was targeted at the community and students and is part of the Deputy Minister of Communications Outreach Programme. A career exhibition was part of the proceedings.

- **The Deputy Minister's Imbizo: Port Elizabeth** at the Raymond Mhlaba Sports Ground in Port Elizabeth on 21 October 2013. The event included a career exhibition and the official launch of three school cyberlabs.

The Institute was also involved in a **public stakeholder event – Education, Employment, Entrepreneurship, Guidance and Advice (EEEEGA)** is a non-profit organisation that assists the youth with information on employment and education through using the internet. A presentation was given looking at the need for e-skills and the impact that this has on the country, the multi-stakeholder collaborative network, the virtual architecture of an e-skills cloud, and smart community knowledge production centres. The event was held on 19 October 2013 and focused on discussing e-skills, e-learning and e-education. 

*Learners going through the e-literacy course at the Institute's stand at the National Skills Conference Career Exhibition in Gauteng.*



*The Institute engaging with stakeholders at the Inqguza Hill CSI Project Launch.*



[continued] **Awareness campaign update**

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At the Deputy Minister's Imbizo: Port Elizabeth - (L) Deputy Minister of Communications Ms Stella Tembisa Ndabeni-Abrahams being interviewed in front of the Institute's stand, (centre) Mrs Phumla Radebe, Chairperson at USAASA, visiting the Institute's stand, (R) Terrence Naidoo, Director: e-Government ICT Infrastructure & Applications, Department of Communications, engaging with Institute representatives.



Interacting with the public at the Deputy Minister's Imbizo



31 Meintjies Street  
Middelburg E/C, 5900  
EEEEGA{Education, Employment, Entrepreneurship  
Guidance and Advice}  
email eeega.youth@gmail.com  
28 October 2013

Please accept our sincere appreciation for the outstanding presentation you made regarding e-learning, e- skills and e- education. Please also accept our apology for the poor attendance.

It was very interesting to hear about your experience. The slides you showed gave us a close look at e-learning, e-skills and e-education.

Thank you so much for sharing your time and experience with us. We all agreed that your presentation was interesting. Please consider adding our group to your data base.

Thank you  
Yours faithfully  
Monde Desha, Manager

Letter of thanks from EEEGA

**CoLab thematic areas**

**Western Cape CoLab:** e-Inclusion and Social Innovation

**Gauteng CoLab:** Creative New Media Industries

**KZN CoLab:** e-Enablement of Effective Service Delivery

**Limpopo CoLab:** Connected Health

**Eastern Cape CoLab:** ICT for Rural Development

**Southern Gauteng/Northern Cape CoLab:** e-Literacy and e-Business (knowledge economy and e-social astuteness)

## Highlighted conferences

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The Institute responsible for e-skills human resource capacity development has identified the following conferences as platforms to further the e-skills agenda. The events provide the opportunity to raise research capacity and to present evidence-based findings within an international setting.



### InSITE 2014 conference

As part of the Informing Science + IT Education conferences, the Informing Science Institute (ISI) is holding InSITE 2014 in Wollongong, NSW Australia from 30 June to 4 July 2014. Thematic areas include:

- The interrelationship between context (historical forces and culture) and information and knowledge transfer.
- Issues in effectively and efficiently informing clients through ICT.
- Teaching ICT, including curricular issues, capstone courses, pedagogy and emerging topics in ICT.
- Using ICT to teach – including e-learning, m-learning and distance learning.

### Call for submission of papers

ISI is calling for the submission of full papers by 30 November 2013 at <http://InSITE.nu>. For more information, link to <http://informingscience.us/2014InSITEcFP.pdf>.



### Conference: Kaleidoscope 2014

'Living in a converged world - impossible without standards?' is the theme for ITU's Kaleidoscope 2014. This will be held from 3-5 June 2014 at the Bonch-Bruевич Saint-Petersburg State University of Telecommunications, Russian Federation.

The conference highlights the need for future standards for ICT services and applications to take into account aspects of socio-economic, cultural, ethical, legal and sustainable development policy. Developing these standards will require concerted global efforts by stakeholders across industry sectors. Kaleidoscope 2014 therefore promotes collaboration in this regard and will highlight the multidisciplinary nature of future ICTs.

### Call for submission of papers

Kaleidoscope 2014 is calling for original academic papers offering bold, innovative approaches to research and development of standards on the subject of industries' and technologies' convergence in today's ICT-dependent world.

Accepted papers will be published in the proceedings and in 'IEEE Xplore'. The best papers will be evaluated for potential publication in IEEE Communications Magazine. Selected papers will be considered for publication in 'The International Journal of Technology Marketing' or 'The International Journal of IT Standards & Standardization Research'. A prize fund totalling \$10 000 will be awarded to the three best papers. Young Author Recognition certificates will also be issued.

The submission deadline is 25 November 2013. For further information, go to <http://www.itu.int/en/ITU-T/academia/kaleidoscope/2014/Pages/default.aspx>



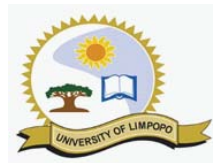
## Partners in the Institute's multi-stakeholder collaboration

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### education



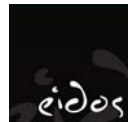
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### government/South Africa



### civil society



### business



### global developmental partners



Kenya



Rwanda

Please note that this list will be extended as there are Memorandums of Understanding in progress across all sectors.

The Institute responsible for e-skills human capacity development is a national catalyst, facilitator and responsive change agent in the development of SA, within the globally evolving information and knowledge-based environment, by leading the creation of key e-skills development strategy, solutions, practices and the implementation thereof, to benefit the total population. The Institute focuses primarily on four components: research, teaching and learning, innovation and a monitoring and evaluation framework.