The impact of ICT on an adult in employment

Seku Sisulu is an ICT teacher at Preston Manor High School. His job includes teaching ICT to the year groups 7 to 10 observing a syllabus given by the school's chosen exam board. He uses ICT technologies to assist him at school, while travelling and also at home. Due to his requirement to prepare future lessons at home, he would need to utilize his personal computer and either email or use a data key to access his files at school. He uses his palm handheld computer to do various things at work and at home; e.g. take the register, make to-do's or uses it as an address book.
He also uses email and his mobile phone to keep in contact with his colleagues and his boss at work.

How do the technologies mentioned above meet the adult's needs?

Mobile Computing – Palm Handheld Computer/PDA (Personal Digital Assistant)

Seku Sisulu uses his Dell Axim X30 PDA to assist him at home as well as at work. For instance, he can keep track of things using the PDA's "to-do" application which would remind him of things he had to do at various points throughout the day.

Personal

Need
Seku Sisulu tends to forget his wedding anniversary; and other things at work, e.g. an important staff meeting slipping his mind. You can quite easily understand why he needs an efficient system in reminding him of such events.

Without the technology
Mr Sisulu would have to use post-its and write notes which could easily get lost or misplaced; also he has to carry pens. Another problem is that he must remember to look at his notes and reminders; so no matter what, he has no choice but to remember using his own mind.

How the technology meets his needs
This is why he needs his PDA. His PDA proves to be far more efficient, organised, not to mention portable than a "pin-up" note board at home/work which he can't carry around with him. He can have an alarm to remind him of important dates several days prior, or on the

day. Another advantage for using a PDA as an organising system is that he would not have to worry about carrying a pen with him – the stylus, which is included with the PDA, serves as the perfect tool for working with the touch-screen interface; and, of course, does not need ink.

Evaluating how the technology meets his needs
The PDA is much more practical than the conventional pen and paper. Since he does not have to use his mind to remember that he has notes/reminders to look at, he would be more relaxed and be able to attend to other situations to a better degree.

Work-Related

Need
Mr Sisulu needs to take attendance in the morning and afternoon at school, to keep register of presences, absences, and lates. The register is a legal document which is compulsory to be filled out.

Without the technology
Mr Sisulu must use the conventional register; mark in the presence of people using different colour pens. This would be frustrating because when a pupil is seemingly absent, but then comes in late, he must use tippex carefully to rectify the absence with a late mark.

How the technology meets his needs
Therefore, at work, Seku Sisulu uses his PDA to call the register and keep a record of the presence of pupils in each of his classes. There are a number of benefits which the PDA holds over the conventional register book; one of which is the effortless access of each class – rather than flicking through pages in a register book, Seku Sisulu only has to look through a categorised list of classes, and click on the desirable one. Additionally, he is removed of the inconvenience of switching to a different-coloured pen to mark an absence; one simple click and the job is done.

Evaluating how the technology meets his needs
Taking attendance can easily be regarded as a miniscule task at work with his PDA. At the end of the day/week, he can then transfer the records via USB (the most common method), the schools WLAN using the PDA's integrated Wi-Fi port, or Bluetooth to his computer (if available) where he can store the data in the appropriate area in the school network. One minor problem for him is battery power and the fragility, but since he would not usually find himself in a situation where he would be likely to drop it/consume a great deal of battery power, this is rather negligible.

Social

Need
Seku Sisulu has a passion for watching movies, and he also needs to watch episodes of Eastenders that he misses.

Without the technology
He would miss the Eastenders episodes and resort to reading the summary on the internet. His passion for movies would deteriorate because he would have to spend money on buying DVDs.

How the technology meets his needs
His friend, who also has a similar PDA, has a movie that Mr Sisulu really wants but can't find anywhere in the market. So, what Seku does, is pair both PDA's via Bluetooth and send the movies, or connect the PDA's via USB/FireWire cable and conduct a high-speed transfer. He does the same with the Eastenders episodes; his friend gets the video file and transfers it to Mr Sisulus PDA so he can watch it at his leisure.

Evaluating how the technology meets his needs
Mr Sisulu's passion for movies would intensify since he would have a greater access to watching these movies. He would be able to watch the movies whenever he likes, and skip/rewind to any part of it by dragging the seeker bar with his stylus. However, storage space is a problem here, since movies would generally take at least 100MB for high quality; and therefore he must purchase an SD card for the PDA which would cost him at least £60 for one with an adequate capacity. Added to this problem, there is the question of battery power; watching full-length movies would not only quickly drown battery, but depreciate the total battery life capacity over time of strenuous use.

The Internet – Email

Electronic mail, abbreviated e-mail or email, is a store and forward method of composing, sending, storing, and receiving messages over electronic communication systems. The term e-mail applies both to the Internet e-mail system based on

the Simple Mail Transfer Protocol (SMTP) and to intranet systems allowing users within one company to e-mail each other. Often these workgroup collaboration organizations may use the Internet protocols for internal e-mail service.

Work-Related

Need
Seku Sisulu needs email for various things in his work-related life; to send files to work (e.g. for lessons prepared while at home), to contact his colleagues and boss (e.g. sick leave, formal letters, work-related discussion).

Without the technology
Mr Sisulu would have to spend an inordinate amount of time writing letters and posting them to contact his boss, for example. He would also need to waste money on his phone with calling his colleagues about work, etc. To take work in to school he would need to spend money on paper and print cartridges and print his work out at home and organise it to be taken to school.

How the technology meets his needs
This saves him any reason for leaving the house and posting a letter, or printing out documents needed for lessons - sparing him the trouble of spending money on print cartridges and paper, which are quite costly. He would send emails to his boss or colleagues and they would receive it immediately; he could also attach work or documents if needed. Another critical advantage of email with Mr Sisulu is that pupils may send him coursework via email so that he could check it in the comfort of his own home and send it back effortlessly with corrections/comments.

Evaluating how the technology meets his needs
Mr Sisulu is now able to spend more time writing the letter than sending it; as emails are sent and received with a click of a button. He doesn't

need to type it and print it using up valuable paper and ink. He also wouldn't have to walk out to post it off.

Email also has its hindrances; most email services have a spam filter system which enables the user to change the setting to low, medium or high. The repeated problem with this is that as spam usually gets through the medium and low setting; this causes much the frustration of selecting the junk mail from his inbox and being careful not to delete his important emails. The only way to rectify this is to change the setting to High. The high setting creates a frequent problem – as well as blocking unwanted emails, it tends to categorise wanted emails as spam too – this could mean important emails not being read in time.

Social

Need
Seku Sisulu needs to watch the news on television and catch up with world stories and technology news; but he doesn't have time to watch it most of the time due to his work.

Without the technology
Mr Sisulu would have to try and find time and watch TV; but this is initial problem, he doesn't have time to sit down and watch TV or listen to the radio. Although he can listen to the radio any time, in his car or at home; he'd rather at least see pictures or video of news so that he could gain a better understanding.

How the technology meets his needs
To compensate for this, he catches up on technology issues and news from the BBC website. He subscribes to their daily technology newsletter via email, which summarises the daily tech news and gives him links to the main stories daily; he could catch up wherever he is, at work or at home or while on the move on his PDA since he is always using a personal computer of some sort.

Personal

Needs
Seku's family live abroad and, due to his work and lack of expenses, he hasn't been able to see them in a long time. He needs to keep in touch with them frequently.

Without the technology

Using the phone to contact them is not only expensive; there is the aggravation of nobody picking up the phone sometimes. Also, since the time zones differ, he has to call his family at a specific period during the day. And usually on the phone you will forget certain things you were meant to say.

How the technology meets his needs

 Email contradicts these problems; he uses it to send his family videos, pictures and update them on news whenever he pleases and they will still receive them regardless of what time it is. Also, he can check when they usually check their mail, so he knows what time they are awake and not busy; so he can instant message or phone them with the knowledge of them being there to reply. He can take as long as he wants to write an email; and because he is relaxed, he would tend to remember important things he is meant to include in the mail.

The Internet (Broadband ADSL connection) – General

The fast ADSL internet connection allows Seku Sisulu to access information from all over the world. The broadband connection proves to be much faster, time-saving, and convenient since you are able to use the phone regardless of whether the internet is connected or not. I will describe more features as I state and evaluate his daily needs.

Personal

Needs

Seku Sisulu needs the internet to shop, check email, bank; and for leisure, play online games and chat using an instant messaging service. He uses email frequently, and also has recently purchased a Playstation online from the leading auctioning website, eBay.

Without the technology
He would have to spend time and petrol to go to these shops and browse their products and in turn buy the products at a higher price because of labour costs. He would have to use phone to contact friends and family (which is costly) instead of emailing.

How the technology meets his needs
He uses his 2mb broadband ADSL broadband to fulfil these needs. Although many people do not feel safe conducting transactions over the internet for fear of lapses in security and hackers gaining access to their personal/bank details; Seku Sisulu feels he knows how to shop safely over the web, and prefers it to going out and browsing needlessly through stores and waiting in the queue to pay. The internet allows him to compare prices of virtually any item with a price checking service such as the one at Kelkoo.co.uk, or Pricerunner.co.uk. A drawback to online shopping is the delivery charge – this would seem unfair when you buy something like a rare book for £5.00 and have to pay an extra £5.00 to cover for postage + packaging. Seku Sisulu also uses online banking as an easier alternative to queuing up to be served. The big plus side of this is that he can do this all with the utmost speed with his ADSL connection.

Social

Needs
Seku Sisulu likes to play games; particularly FPS (First Person Shooter) games. These games need to be played online through the game's official worldwide network. Mr Sisulu likes a challenge; this would give him the perfect opportunity for playing with opponents of a different calibre. This means he needs a high speed connection for the game to be able to connect to the server and to any user around the world without time-lag or server time-outs.

Without the technology
Simply put, he wouldn't be able to connect with gamers around the world with ease. If he had a dial-up connection, it would be excruciating just to connect to the user – and when playing the server would undoubtedly time-out.

How the technology meets his needs
He uses his high speed ADSL connection to connect with other gamers around the world when playing an online multiplayer game such as Doom 3. Thanks to a much wider availability of high-speed broadband at cheap prices, a large number of people are able to play multiplayer

online games comfortably without server time-outs and little lag. Though during some periods of the year the broadband speed gets noticeably slower, it would be sufficient enough for Mr Sisulu 's online gaming.

Work-Related

Needs
Seku Sisulu needs easier and more efficient methods of teaching via tips and information from teaching websites on the internet. He can find out easier ways to make pupils understand topics which tend to be more difficult for some.

Without the technology
Mr Sisulu would be more susceptible to stress because he would feel helpless for his pupils who require more in-depth or simpler teaching methods – he would have to take more time inventing and perfecting teaching methods for selected pupils. This is in no way good for his health, esteem or work.

How the technology meets his needs
The internet helps him greatly in this aspect, and he can constantly learn new ways of teaching his students. He uses the internet to watch videos and listen to audio tips and tricks on new teaching techniques. The constantly growing list of new techniques of teaching some topics that are difficult for some are easily accessible by Mr Sisulu on the internet; and his job would be made much, much easier.

On the whole, the internet has proved to be very convenient for Seku Sisulu and has influenced his life considerably. It renders it needless for him to step out of the house to shop, transfer money, or make contact with friends/relatives/colleagues. In turn, this gives him much more time and a lighter schedule when it comes to preparing lessons at home. It also provides leisurely activities for him such as online gaming and collaboration with people around the world.

Mobile Communications – Mobile Phone

The Nokia 6630 phone has brilliant features
such as a video-calling system, voice dialing,
text messaging (SMS – Short Messaging
Service), multimedia messaging (MMS –
Multimedia Messaging Service) and Wi-Fi
compatibility which enables one to wirelessly
connect their phone to a WLAN (Wireless
Local Area Network) and access the internet.

Work Related

Needs
Mr Sisulu lives quite far from work, and uses his car to get there every
morning. In case Seku Sisulu is late for school (stuck in traffic, car
wouldn't start, etc.) he needs to be able to inform the school of his
absence while being unable to use his house phone.

Without the technology
If he is stuck in traffic he would be unable to inform the school of his
late arrival and in turn develop a bad reputation with his superiors. If he
forgot anything from work while going home, nobody would be able to
contact him while he's on the move.

How the technology meets his needs
His mobile phone aids him critically in these situations, where if he is
hindered from reaching school he is able to arrange a supply teacher
to take his class and also to set cover work to compensate for the snag
in his teaching schedule. He would also be able to be contacted easily
by his colleagues or boss on urgent/important matters when he is not at
work or is at home.

Social

Needs
In the holidays, Seku Sisulu likes to invite friends and relatives over for
dinner. However, they need assistance in locating his residence, and
they do not possess a Satellite Navigation system. Therefore, Seku
needs to direct them himself.

Without the technology
Mr Sisulu would receive a great hassle over calling them over his landline as it would cost him more to call another mobile; also, if he has the same problem when trying to get to a friend's house, he must contact them somehow while on the move. To do this he must find a payphone and waste time and money pulling over and calling from there.

How the technology meets his needs
Mr Sisulu uses his mobile phone to give them directions. He can also use it to make sure they come on time and that they're alright. This would be better than them having to stop and check on the atlas. Using his mobile phone would be better than using his landline because it would cost less. He would also be able to call his friends when he needs directions.

Personal

Need
Seku also has a wife and son. He would very much need to be in contact with them, just as much as they would need to be with him, especially in case of emergencies.
He needs to contact his family at home when he is on his way from work, and his wife would need to let him know if she is going out somewhere; shopping, for instance.

Without the technology
Mr Sisulu and his family would both be oblivious to each other's daily activities; and if there is any emergency both would not be able to reach each other directly.

How the technology meets his needs
His mobile phone lets him do this, and he can contact his family anywhere and anytime to make sure everything is fine. Sometimes, he may feel that calling his wife when he knows she's driving isn't a good idea. On these occasions he would use SMS or MMS to send messages; MMS would be more appropriate and appealing on occasions such as anniversaries or birthdays.