



PERFECT

UNIVERSITY OF ZIMBABWE
COLLEGE OF HEALTH SCIENCES

PERFECT News

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The difficult but possible doctoral journey

By Dr Madhombiro



My decision to embark on the doctoral journey was not easy but I got a little encouragement from my would be principal supervisor, Prof Seedat. I had a passion and belief in myself that I could do it. However with no funding in place it appeared like a fantasy or as we say in psychiatry a delusion of grandiosity. Notwithstanding the interest, passion and a problem to solve, I made a decision.

Once I made up my mind, the topic was obvious, the issue I had passion about, the formidable combination of alcohol and HIV. My personal struggle with a family member affected by this condition made this decision both a scientific and emotional journey. The choice of the institution was driven by my desire for cultural diversity so Stellenbosch was a fitting choice.

The choice of local supervisor was tricky. My target was Prof "Rus" Rusakaniko who has a reputation of being a merciless supervisor, but I braved that one. With Prof Seedat, who had more than 400 publications, I under-rated the challenge in terms of the quality

of work that was expected of me. The two however proved to be the best combination for a novice researcher that I was. Funding for Ph.D. studies is a necessity, no debate about that. So many times, I was told that I will not get through it as I had no committed funding except for the opportune R50 000 I had from Stellenbosch University. But as you go forward, you have to make people believe your dreams, but I guess you need to believe the dream yourself. Mr Chingono, convinced PERFECT to give me a chance. By the way I was a year older than the cut-off, but they believed I could do it. Somehow down the line, AMARI came through and a bursary from Stellenbosch got me through!

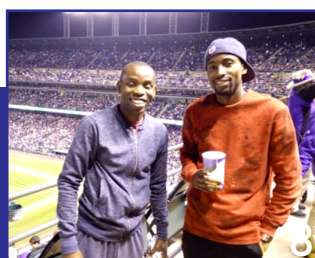
It was sweet to graduate with a Ph.D. being the first doctor and Ph.D. in the family. I wish to thank all who believed in me and entertained my fantasies.

Thank you PERFECT team under the able Professor James G. Hakim. I also learned leadership from the real leaders and I am serving as the chair for the department of Psychiatry. On the research agenda, I am looking forward to be an independent researcher in the next 6 years, God willing.

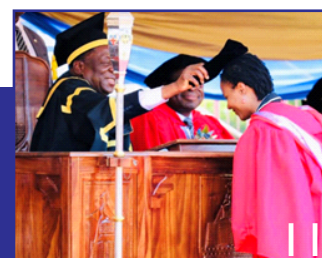
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Interview with Prof Hilda Angela Mujuru, a seasoned researcher



Who is Professor Hilda Mujuru?

I am a lecturer, mentor, pediatrician, clinical epidemiologist and researcher in child and adolescents health,

HIV/AIDS, Malaria and Pulmonology. I was born and bred in Zimbabwe and received my undergraduate training at the University of Zimbabwe (UZ). After graduating from UZ, I worked as an intern at Harare Central Hospital and Parirenyatwa Group of Hospitals. I also worked as a GMO at Bindura Provincial Hospital. I returned to Harare and worked in the Accidents and Emergency Department before enrolling for postgraduate training. I qualified as a pediatrician from the UZ in 1994 and joined the faculty in 1996.

A few months after joining the UZ, in 1996, I spent some time learning Pulmonology at Wilhelmina Children's Hospital's Paediatric Respiratory in U Utrecht, in the Netherlands. I found this very useful as I learnt how to perform basic spirometry and other lung function tests. When I returned, I started teaching Pulmonology related topics in the Department of Paediatrics and Child Health at the UZCHS.

In 2002, I attended clinical research monitoring trainings in Thailand organised by WHO. As a result of this training I participated in monitoring a couple of studies. I however did not enjoy working as a monitor because I wanted to be a great researcher. Pursuant to this goal, I enrolled for a Master's degree in Clinical Epidemiology to learn advanced clinical research skills. I really struggled to find my feet in research, but that Masters in Clinical Epidemiology enhanced my skills in medical research. I have never looked back since completing my studies in Clinical Epidemiology.

I have been involved in a lot of researches ranging from clinical trials, observational studies, disease surveillance to operational researches. I currently serve as the Country Coordinator for Rotavirus Surveillance. I am a Co-Investigator for the Achieving Control of Asthma in Children in Africa (ACACIA) study. I am part of the IMPAACT study, a pediatric HIV/AIDS research project

being run the UZCHS-CTRC CTU. I have also worked with colleagues at BRTI on both HIV and TB research focusing on older children and adolescents. We recently started a Neonatal Research Group within the Department of Paediatrics and Child Health working with Dr G Chimhini and Dr G Powell. We recently received a grant from the Gates Foundation for a neonatal jaundice study.

Can you briefly share how you finally made the decision to specialize and become a researcher?

It was a bit difficult to make a decision between Pediatrics and Obstetrics & Gynaecology, but at the end the foetus in utero was beaten to it by the new-born and beyond. Earlier, I mentioned how I was involved in monitoring clinical trials. It is during this period when I felt that I should be conducting clinical researches instead of monitoring the trials. I stopped monitoring clinical trials and just after that, the late Dr Pazvakavambwa then encouraged me to join the IMPAACT study team. That was my first direct involvement in clinical research. Since then I haven't turned back.

What challenges did you face in your research career path?

Time was particularly challenging. Faced with the huge clinical workload and high student numbers, trying to fit research activities was a real challenge. Funding has been also a challenge.

What role are you playing in promoting research at the college?

I mentor & teach postgraduate students and I am also a facilitator for Research Methodology courses offered by the PERFECT Program, Dept of Community Medicine & the Research Support Centre.

Qualifications

MBChB, MMED in Pediatrics, MSc in Clinical Epidemiology.

Your last words or nuggets of wisdom?

You have to start somewhere! You can start with observational studies, case reports, case series, cohort studies, etc. You just need to start! If you wrote a dissertation as part of your program - publish it. That's your starting point. Enrich your research territory- do some research methodology courses, there are many free basic online courses. Consider undertaking a programme that will increase and improve your research skills, an MSc in Clin Epi, an MPH or a PhD. Take advantage of any available opportunities to learn research methodology like PERFECT. Identify a research mentor who can hold your hand as you take your initial steps in the research world or whose steps you can try to follow.

Dr Taderera appointed Chairperson of the Department of Physiology



Dr Taderera's appointment as the Chairperson of the Department of Physiology came at a time when she least expected it. This was after Professor Chifamba, the outgoing Chairperson was appointed the Deputy Dean of the College of Health Sciences. She did not get any training of some sort and she felt so unprepared for the post. She thought she would make tonnes of mistakes and she honestly didn't know how she was going to make it through the rest of the term of office. The chairmanship appointment came shortly after her award as a trainee for the PERFECT grant. This opportunity for career and research advancement is a unique and noble package which not only major on the core objectives highlighted, but also pursues empowerment of trainees in different areas that are key to career development. The Leadership and Health Governance course sessions administered by experienced personnel transformed all her fears into confidence, courage and have given her that fuel that has taken her this far. The Principles of Leadership and management have been instrumental in the appointment. She received general advice and anticipated challenges that new leaders face and all the information learnt have been useful in her discharge of duties. The two opportunities that came at the same time in her life have given her an opening for self-discovery and self-growth. The concepts and principles learnt, and still being learnt during the mentored classes are a self-driving life skills that when religiously adopted equip one for immediate and long term benefits which ensure successful and satisfying career achievements.

A quote from Dr Taderera *"Nothing new can come into your life unless you are grateful for what you already have"*.

Thanks to the PERFECT Program for affording me the opportunity to grow!!

COZiE exchange program attachment to Denver Colorado 2018

By Drs. Nigel Dzvanga and Ron Madhovi

From the 25th of September to the 12th of October we were privileged to visit the Medical school campus of the University of Colorado in Denver. Here we share some of our experience.

The long trip from Harare to Denver was a gruelling twenty-two hour affair cut up into three flights and two nervous races to catch our flights through the sprawling airports in Johannesburg and New York. We flew through the night across the Atlantic ocean; a thing as monotonous as the incessant whining of jet engines in the background. We watched movies, paged through magazines and got sleep in fits and starts and all the while the enormous Airbus A 350 we were in raced forward at break neck speed but never seemed to get there.



COZiE exchange program attachment to Denver Colorado 2018

We arrived in Denver at 10am on the 24th of September landing in a time zone a full 8 hours behind Harare. Our brains kept telling us the sun is coming up but it should be going down. The following case of jet lag left us feeling like sleep confused zombies for days after we arrived. We were welcomed by a smiling Dr Brandenburg who had obviously gotten a very good night's sleep. Many thanks to her for hosting us in her home.

The day after, we settled into the business of the trip. We were attached to medicine teams at the University Hospital. Dr Nigel Dzvanga spent most of his time with the gastroenterology teams joining them for consults, seeing patients in clinic and for procedures. He was constantly raving about his times with the "GI guys." There was a broad range of medical technologies available and it was great to see how they are applied the setting.

Dr Madhovi spent a good amount of time following the team in Medical Intensive Care and learnt much on the unique needs of medical patients. Modelled, there were cordial interactions between different disciplines involved in the care of critically ill patients who almost invariably had multiple problems needing attention.

The rest of our time was spent following teams in the general medical wards and attending teaching seminars and conferences covering a diverse range of topics in medicine. Nigel and I were honoured to each present a medical case exemplifying our experience in Zimbabwe to residents at the



daily noon conference. We are reliably informed that we had useful content to share. This added to what was a great learning experience all round.

After two and half weeks we travelled safely back home.

Many thanks to Dr Suzanne Brandenburg, Dr Amber Khanna, Prof. Thomas Campbell and Prof. Nancy Madinger for hosting us wonderfully; also to Prof. Ed Havranek for taking us up into the picturesque Rocky mountains and then to a baseball game, that quintessential American pastime.



PERFECT Fellow graduates with a DPhil in Molecular Virology

Dr Racheal Shamiso Dube Mandishora is a lecturer in the Department of Medical Microbiology and a cohort 1 fellow for the PERFECT Program at UZCHS. She graduated with a Doctor of Philosophy Degree in Molecular Virology from the University of Zimbabwe in October 2018. Her project was titled, "*Molecular characterization and diversity of Human Papillomavirus (HPV) in women reporting for routine cervical cancer screening*".



PERFECT Fellow graduates with a DPhil in Molecular Virology

Her main findings were that HPV infection is significantly more common in HIV positive women than the HIV negative ones. She generated phylogenetic data, which suggested that HPV genetic hyper-variability is driven by tissue tropism, HIV co-infection and cytology outcome. The data will contribute to policies for HPV related disease prognosis, anogenital cancer screening and treatment.

Dr Dube Mandishora attributes the successful completion of her DPhil to a supportive family and outstanding supervisors and mentors. Her PhD work was supervised by Prof. Z.M Chirenje (UZ-CHS, Department of Obstetrics and Gynecology) and co-supervised by Prof. N. Chi'nombe (UZ-CHS Department of Medical Microbiology) and Prof. K. Duri (UZ-CHS Department of Immunology). The trio of supervisors was a perfect and dynamic combination because of their diverse areas of expertise in Clinical science, Virology and Molecular Biology. Dr Dube Mandishora encourages prospective DPhil students to select their supervisors wisely, as they have an impact on the quality of the science and the manuscripts that will be produced from the DPhil. She commends her supervisors for their support and discipline that allowed her to submit her thesis within the 3 years that she was registered for.

Her main supervisor, Prof. Z.M Chirenje was also her UZ-PERFECT mentor. He introduced her to renowned global experts in HPV research, such as Prof. J. Palefsky (University of California at San Francisco, USA), who in turn mentored her and provided counsel throughout

her PERFECT fellowship and DPhil work. Dr Dube Mandishora is also grateful to the Letten Foundation of Norway for their generous funding during her DPhil studies, with special mention of Prof. B. Strey-Pedersen for opening doors of opportunity and introducing her to some of the great European scientists in HPV research. To answer her DPhil research questions, she required state of the art molecular equipment, and Letten Foundation made this available. She had to travel to Oslo, Norway to carry out the laboratory work and to perform high-tech Bioinformatics data analyses. She built lasting collaborations with Dr Trine Rounge (Cancer Registry of Norway), Dr Irene Christiansen, Prof O. Ambur and Ms Sonja Lagstrom (all from the Norway HPV reference laboratory). "I am truly humbled by the dedication and integrity from my supervisors, mentors and collaborators. Not only did they shape my DPhil, but they molded my career and propelled my long-term goals", says Dr Dube Mandishora. She also expresses her gratitude to her family for being very supportive. My husband and children allowed me time to travel and to complete my DPhil work, they were very involved in my work and took time to understand my findings and they continuously celebrate the DPhil award. My parents and siblings were also cheerleaders, reminding me of how I am the first in our immediate and extended family to attain such a qualification. With all this unwavering support, you can surely achieve any goal! As a Christian, Dr Dube Mandishora also acknowledges the Lord for her blessings.

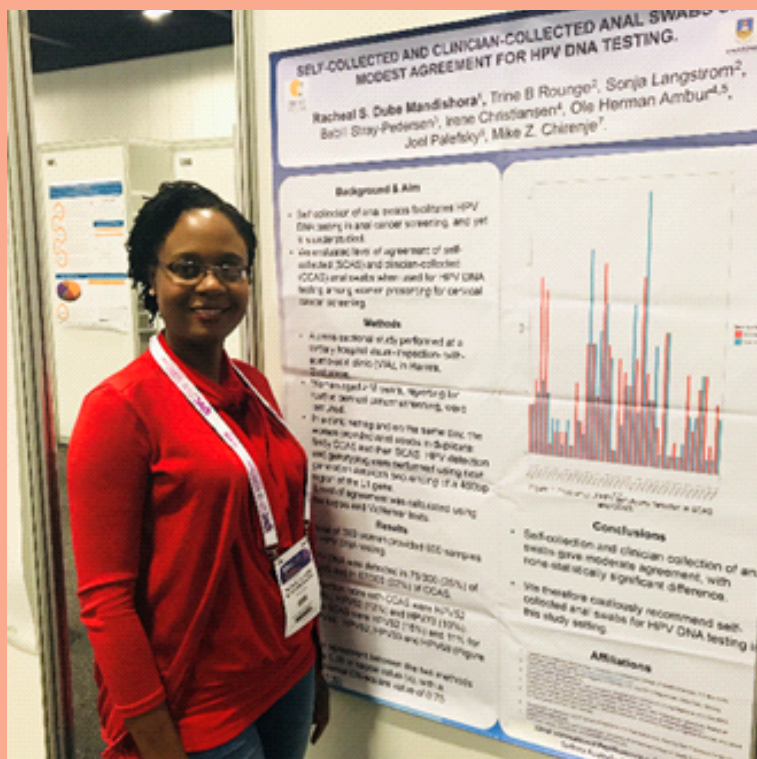


Dr Dube Mandishora, capped by His Excellency President Emmerson Dambudzo Mnangagwa, the Chancellor of the University of Zimbabwe.



Dr Dube Mandishora (extreme right) at the University of Zimbabwe graduation ceremony in October 2018, graduating together with Dr Tecla Mlambo (left) and Dr Tsitsi Monera (middle), who are also UZ-PERFECT fellows

Clayton Dedonder Fellow and Cohort One PERFECT mentee awarded a research fellowship



Dr Racheal S. Dube Mandishora was recently awarded a 12 months GloCal research fellowship to carry out research on the “Whole genome diversity of Human Papillomavirus (HPV) in HIV infected women with pathologically confirmed cervical precancerous and cancerous lesions”.

This work will be carried out in collaboration with Prof. Joel Palefsky (University of California at San Francisco) and Dr Trine Rounge Cancer Registry of Norway, under the guidance of Prof. Zvavahera M. Chirenje (UZCHS Department of Obstetrics and Gynecology). Other Co-Investigators include Prof. Rudo Makunike-Mutasa (UZCHS Department of Histopathology), Dr Margaret Pascoe (Newlands Clinic) and Prof Margaret Borok (UZCHS Department of Medicine).

Dr Dube Mandishora presenting a poster titled, “Self-collected and clinician-collected anal swabs show modest agreement for Human Papillomavirus (HPV) DNA testing”, at the 31st International Papillomavirus Conference in Sydney Australia in October 2018.

Testimonial from Dr Dube Mandishora

I would like to thank the UZ-PERFECT program for fully sponsoring my trip to Sydney, Australia, where I attended the 31st International Papillomavirus Conference and presented an abstract. This is the biggest Papillomavirus related conference, which is organized every 18 months by the International Papillomavirus Society (IPVS). UZ-PERFECT paid for my conference registration fees, accommodation and return flight. This was a great platform for me to showcase the work that I carried out during my PERFECT fellowship. I also got the opportunity to have one-on-one meetings with pioneers and authors of HPV genomic research work. I was able to meet my UZ-PERFECT external mentor, Prof. Joel Palefsky and he took time to help me refine the HPV related ideas that I had for future grant applications. Overall, the conference was a place where I shared my knowledge, rubbed shoulders and learnt from global leaders in HPV research, met my mentors and collaborators and identified future grant opportunities. Just from a one-week trip to Sydney, I can identify the milestones gained in my career, in the last couple of months, because of the networking and the presentation I gave. Thank-you to the PERFECT directorate and secretariat team!

Clayton Dedonder fellow clinches GloCal Health Fellowship



Cathrine Tadyanemhandu, is a physiotherapy lecturer in the Department of Rehabilitation. Her area of interest is cardiorespiratory physiotherapy. She studied for a PhD in Physiotherapy at the University of Witwatersrand (SA). During this time, she was awarded the Fogarty HIV

Implementation Science Research Training Program (FHIRTP). She was a HEALZ scholar in 2016-7 and she is also one of the Clayton Dedonder Fellows (2018-9). Her special interest in the area of cardiopulmonary rehabilitation motivated her to apply for the GloCal Health Fellowship, which is funded by National Institutes of Health (NIH) Fogarty International Center (FIC). This will be a 12 months (July 2019-June 2020) fellowship program and include the following benefits:

Clayton Dedonder fellow clinches GloCal Health Fellowship

- a) A monthly stipend as a Zimbabwean postdoctoral fellow
- b) Tuition/fees: US\$3,550 available for online or onsite courses
- c) Research funds in the amount of US\$15,000
- d) Travel costs (up to US\$3,670) related to the NIH orientation in Bethesda, paid directly by Fogarty/UCSF
- e) Funds for international host institute support: US\$4,000 provided to UZCHS

Purpose: The GloCal Health Fellowship provides aspiring global health researchers with outstanding interdisciplinary education and training in innovative research designed to improve health for populations around the world. The fellowship supports mentored research fellowship for investigators interested in studying diseases and conditions in developing countries. The fellowship is designed for: US doctoral students (PhD, DrPH, etc.), professional students (MD, DDS, DVM, PharmD, etc.) and postdoctoral fellows, as well as foreign postdoctoral fellows from affiliated international sites in low- and middle-income countries (LMICs).

Study location if applicable: Harare (Parirenyatwa Hospital Family Care Centre (PHFCC), a government clinic affiliated with the University of Zimbabwe College of Health Sciences (UZCHS); Wilkins Infectious Diseases Hospital and Beatrice Road Infectious Disease Hospital (BRIDH).

Project summary: Zimbabwe has among the highest HIV prevalence in Africa and the world (14.7%) (UNAIDS 2015), and is

concurrently a tuberculosis (TB) “high burden” country (HBC). Following successful TB treatment, many individuals develop progressive and debilitating TB-chronic lung disease (TB-CLD). The prevalence of TB-CLD is high, and many affected are young and economically productive, creating a major concern given the already precarious position of Zimbabwe gross domestic product (GDP). TB-CLD and HIV/TB-CLD thus has repercussions both in the workplace and in the social environment, and new efforts moving beyond existing TB guidelines and policies are urgently needed to address this problem in a collaborative fashion.

Pulmonary rehabilitation practices have shown excellent effect sizes in chronic lung diseases of alternate aetiologies, and pilot data from Uganda also support its use in the post-TB setting (Jones et al. 2017, Garvey et al. 2018). As a cardiorespiratory physiotherapist, I feel that I have the potential to make a major impact in maximizing function and quality of life for individuals with TB-CLD who have otherwise few to no treatment alternatives, and have been excluded from major global TB initiatives. With the economic and political challenges we are facing as a country, the issues of promoting health in the population to have a healthy and productive nation becomes important. People with TB-CLD can still live a healthy life and their function maximised if they receive holistic treatment. Since ART and TB drugs has led to longevity in HIV/TB-CLD patients, improvement of quality of life of these patients is now a significant concern for policy makers and researchers, and this can not only be achieved by medication alone. The purpose of the study is to

implement a home-based pulmonary program which offers a potential for convenience, cost savings and increased access so as to increase the accessibility of pulmonary rehabilitation with the ultimate aim of improving function and quality of life in affected patients

Mentors for the project

Mentor 1: Prof John Metcalfe (MD, PhD, MPH)-Associate Professor in Residence at University of California, San Francisco. He has expertise in critical care and respiratory infectious diseases, with a particular interest in HIV-associated highly drug-resistant tuberculosis clinical management and translational research.

Mentor 2: Dr Joconiah Chirenda (MBChB, MPH (Z), MBA (ESAMI)-He is a lecturer in the Department of Community Medicine, University of Zimbabwe. His area of expertise spans across communicable diseases with a special interest in HIV and TB.

Mentor 3: Dr Liam Bagley (BSc Physiology and Pharmacology, PhD skeletal muscle and Exercise Physiology)- He works in the Musculoskeletal Science and Sports Medicine at Manchester Metropolitan University. His expertise in exercise physiology and exercise physiological assessments will be of great value to the project.

Mentor 4: Dr Christine Garvey (FNP, MSN, MPA, MAACVPR)-She is a clinical nurse who is the pulmonary rehabilitation specialist at the University of California San Francisco, Sleep Disorders and Pulmonary Rehabilitation. Her area of expertise include cardiovascular and pulmonary rehabilitation.

PERFECT trainees secure research funding



Dr Patience Kuona



Dr Wayne Manana



Ms Rudo Siwela

The PERFECT Program leadership wishes to congratulate three trainees for being awarded grants and fellowships to support their research activities.

Dr. Patience Kuona, a cohort 1 trainee was selected by the Pediatric Association of Zimbabwe to lead a project funded by UNICEF to the tune of US\$50,000. The project seeks to promote quality management of acute malnutrition cases in Zimbabwe and to mentor Ministry of Health professionals.

Dr. Wayne Manana, another cohort 1 trainee was awarded, the 2019-2020 Oral and Maxillofacial Oncologic and Microvascular Reconstructive Surgery fellowship.

Ms Rudo Siwela, a cohort 2 trainee was selected for the TechWomen program which will take place in September 2019 in the USA. The TechWomen program is an initiative by the United States Department of State Bureau of Educational and Cultural affairs. The program aims to empower, connect and support the next generation of women leaders in science, technology, engineering and mathematics (STEM). Ms Siwela's interest is in Musculoskeletal Health. TechWomen mentorship will capacitate her with technological, administrative and entrepreneurial skills. These skills will enable her to translate her research and clinical skills into viable technologies and community projects.



Private browsing

Did you know that all browsers have a private browsing feature that allows you to browse privately?

What it is

When you browse privately, other people who use the device won't see your activity. Anonymous Web browsing through IP hiding tool helps prevent third parties from tracking the sites you visit. It also protects your computer from online viruses that attack your computer by connecting to your IP address.

When to use private browsing

Private browsing should mainly be used to protect personal information when using a shared computer especially in public spaces like hotel lobbies, airports or library. Private browsing can be used when logging into emails, bank accounts or personal accounts on social media. Your activities will be deleted when you close the browser window.

How to activate private browsing

- In Microsoft Edge browser, click on the 3-dotted More link and select New InPrivate window.
- In Internet Explorer, click on Settings > Safety > InPrivate Browsing. You can also use the keyboard shortcut **Ctrl+Shift+P** to launch it.
- In Mozilla Firefox browser, click on Settings > **New Private Window**. The keyboard shortcut **Ctrl+Shift+P** works here too.
- In Opera, click settings> New private window. For Opera, the keyboard shortcut is **Ctrl+Shift+N**.
- In Safari, Go to File > New Private Window from the menu bar. The keyboard shortcut is **Shift+Command+N**.
- In Google Chrome, private browsing is called incognito browsing. To launch incognito browsing, open the chrome menu and select > New incognito window. The keyboard shortcut for Chrome is **Ctrl+Shift+N**.

Is Private browsing completely private?

A word of caution

Private browsing is not completely private. Your activity might still be visible to:

- Websites you visit, including the ads and resources used on those sites
- Your Internet Service Provider, employer, hotel, University, or whoever runs the network you're using. (Active network equipment could still keep tabs on your browsing activities)