

**Dr. Nelly Bencomo - Teaching Statement.**  
**May, 2016**

**- Background and Introduction**

I enjoy teaching. I got my first (junior) lecturer position at the Universidad Central de Venezuela (UCV) in 1993. At first I was a part-time lecturer during 1993-1997 and a full-time lecturer during 1997-2003. At the UCV, I went through a two-year training as an Instructor Lecturer (Junior Lecturer) (October 1999 – October 2001) in order to be promoted to Assistant Lecturer (with tenure position in 2003). This **training program is very structured and rigorous** and is part of the preparation of all Assistant Lecturers in any public university in Venezuela. It is a very competitive field.

From 2003 until 2008 I was a PhD student at Lancaster University, UK. As part of my PhD scholarship I was a Teaching Assistant. At Lancaster University (during 2003-2008) I shared with different academic staff members the responsibility for designing and delivering teaching material (theory and practice). After I finished my PhD, I was a researcher at Lancaster (2008-2011) where I continued supporting the teaching staff as a guest lecturer. ) Between 2011 and 2013 I worked on my own EU Marie-Curie Fellowship in Inria in France, when I had the opportunity to supervise my own Master student who got her MSc degree with honors and with at least 3 Conference papers published under my supervision. Since May 2013 I have been a lecturer at Aston University where I have had the opportunity to teach different modules with different roles. I have been a module leader but also have shared the duties of modules with other staff members. I have also had other roles such as supervisor of Final Year Projects, Group projects, Personal tutor and Final Year Tutor for Computing for Business (2014-16).

**- Designing and plan learning activities and/or programmes of study**

**My Goals:** As a teacher, **my main objective is to teach students how to teach themselves** [5]. If I want this to happen, I need to ensure that students have the required tools (e.g. they must know OO programming principles instead of just Java, or they must know C before studying the Linux,) and see the course material as relevant [17]. I try to awake my students' curiosity.

**I try to reach all students** and respect individual learners and their needs. I know there is always the group "leader" of good students and these students need to be challenged with advance questions and material. Otherwise, these students would lose interest and may get "bored" and not come to lectures. However, I do not forget the "weaker" students. I take care of these students using material according to their levels and needs. The material will be easier for them as I believe that a minimum good level of quality needs to be set of course.

During my lectures and **to spark student curiosity and critical thinking** [22], I ask leading questions and pose open-ended extra-credit problems during lectures. For example, in the CS1410 Java module I teach at Aston, during a lecture, I recently discussed with the students their different designs and inspired them to have a lively discussion about why they believe their designs were better than the others [16]. I managed to get engaged at least 8 students during the discussion. After the discussion, the students realized that it is impossible to name a best design, as it will depend on the non-functional requirements and their priorities. If the requirements state that speed is the priority, then the final design would be very different is the requirements have stated that small budget is the priority [17]. I recall that the

students were very passionate about their designs proposed. In the end the students realized that all of them had provided good designs.

**Research and Teaching:** The modules I most enjoy teaching include those where I can make links to my usual research topics [[2,3]. I enjoy being able to make links to my own research. However, I consider myself lucky as I have found that many of the modules I can teach lend themselves to be linked to my research. **I use examples from the real world, and related to my own experience and expertise as a researcher, to support theories and concepts explained in my lectures.** I have found that this approach motivates the students.

**Designs of Modules and Programs of Study:** When in Venezuela, as part of my training, to get the tenure position as a lecturer, **I took the course *Fundamentals of the Design of Courses and Elaboration of Programs* [21]:** This course was about how to design module programs and syllabus. As part of the assessment of the course I was required to design the 2 new courses. I have (co) designed and re-designed several modules (undergraduate and post-graduate) following the knowledge acquired in this Course.

### **Teaching and/or supporting learning**

**Reflection to support learning:** To improve my teaching, I seek to harness my teaching goals to the task of improving student performance: I challenge myself to **question my teaching principles and learn how to teach better.** A way of how to do this is to follow a strategy suggested by the teaching team at Aston and I believe it is correct and a good strategy. The idea is to ask students for feedback earlier rather than later. It is amazing how much we can learn from this early feedback in order to leverage the learning process of the current module. In week 4, I ask the students what they like about me as a lecturer and the subject I am teaching and how they think it can be improved. It can be an eye opening! Receiving good feedback can translate into having a motivated lecturer and therefore motivated learners. However, lecturers can also received important feedback on how to improve the process. Also, the students find themselves part of a community that take them into account.

**Challenge.** I challenge students to push themselves and work hard: I want them to get as much out of a class as they can. **A teacher cannot challenge students without their participation.** I strive to devise challenging problems that consolidate the course material (lecture, tutorials and labs), and then push the student to move beyond that starting point [16]. I usually talk about examples from my own experience or invite guest lecturers who work in Industry when possible. I work hard to engage my students through lectures and tutorials. I craft a self-contained lecture that imparts a cohesive concept that links back to the previous material, such as previous lectures or modules. To encourage student involvement, I employ the Socratic method and ask questions, but when answers are not forthcoming I do not stall my lecture, unless I believe that most students are lost. Where possible, I start with simple examples that I generalize. When students are asked “what did you like best about this module?”, the following are common answers:

*“lectures were enthusiastic”*

*“ interacting with peers and learning something new that is challenging “*

*“Nelly is very enthusiastic”*

*“the lecturer asks questions and encourage us to participate”*

**Balance and using the feedback received:** With no doubt, a teacher walks a tightrope here: if a class is too challenging, students can become discouraged and

disengaged. When I taught for the first time Software Project Management at Aston, I initially simply followed the material I received as I prefer to avoid moving too many variables at once. I noticed that the students were struggling a bit, so I took advantage of the tutorials I had to redesign and emphasized the application of concepts in those sessions. After one or two weeks, students started answering the questions I posed and the class made up the ground that we had lost in its rocky opening.

#### **- Assessing and giving feedback to learners**

**Different assessments:** Over the time as a lecturer, I have been in charge of designing, implementing and **preparing students for different types of assessments**, both formative and summative [1], such as coursework, written exams, oral exams and short quizzes. I make sure that **students understand the assessment structure and marking criteria** in advance. For labs and tutorials I advocate, when possible, for continuous assessments to provide students with regular feedback on their progress [18]. I believe that for lectures the techniques to use are rather different and I provide previous exam papers and discuss different possible answers. I find useful to discuss mistakes made by students in the past to improve awareness. The discussion includes among others :

- how illegible writing can jeopardize the understanding of the exam
- the need to be concise while answering questions
- the benefits of using bullets instead of verbose paragraphs
- how to compare and contrast concepts

**Fair Assessment:** While designing the exams I make sure that questions are geared towards the learning outcomes specified in the module descriptions and the material of the lectures. Usually a written exam has several sets of questions, each set focuses on one or two related intended learning outcomes [18]. I believe exams should offer different levels of challenge to accommodate different skills and needs.

**Feedback:** I support the students during their individual and group presentations. I advice the students with **clear guidelines** and **I give both oral and written feedback**. I focus on positive aspects at the beginning and present negative feedback as a way to learn lessons from the experience. I encourage the students to use my office hours for individual or group consultation to provide support for the preparations of their presentations. I talk to them about presentations skills covering academic and linguistic skills covering aspects such as public speaking, effective collaboration and body language, useful for future professional practice.

**Dealing with Uncertainty:** When a module has a 2-hour exam that represents the 100% of the marks, the students tend to need reassurance during their preparation for the exam. That is the case of the module CS3360 (Software Project Management) I have taught during the last 3 years. I have designed and maintained a self-study material, which is a questionnaire that helps the students to structure their preparation for the exam. The material has so far 60 questions, which I update every year. The performance of the course and self-confidence of the student have gone up with the self-study material. The material covers advice w.r.t. the exam's structure and techniques to take the exam. I believe the self-study material is better than providing the students with previous exam papers. The exam board noticed the improvement of the performance of the module CS3360 since I took care of it. We discussed how it represents a good technique to deal with the uncertainty students have with a final exam worth 100% of the marks.

**- Developing effective learning environments and approaches to student support and guidance**

I have **taught, organized, designed, redesigned and co-delivered a wide range of undergraduate modules**. I have worked in a number of **different teaching settings**, from lectures (40-50 students), labs (40-120) to tutorials (8-20 students). I have also **provided pastoral care** to personal tutees and placement students, served as **Final Year Tutor** for Computing for Business serves, **Final Year Project and Group project supervisor** and **lecturer of the distance learning Apprenticeship Program (AP)** at Aston [9].

**Distance learning.** In my role as a lecturer for distance learning modules, I have been supported by the specialist team on e-Learning at Aston to deal with typical issues in e-Learning [12,13]. Usually the students enrolled on distance learning courses are different from students on campus. In the AP, students have professional experience and therefore, they need to be challenged in different ways. Also, while preparing the modules offered online [10], I ensure that the videos of my lectures are published on time. I supervise and synchronize with the Teaching Assistant (TA) who prepares and delivers the virtual tutorials based on my lectures recorded. We identify specific parts of the videos and provide them to the students as hints to follow in the preparation of the tutorials. Such links allow the students to rapidly engage with the tutorials. In the distance learning AP, I advocate for having two sessions for lecturing on campus during each term. I believe that meeting the students in person at the beginning of the module can improve the communication among the team. A second meeting at the end of the term allows a review of the material and preparations for the exam [14,15].

**Multi-media resources.** I make use of blackboard to provide self-study techniques and material as a way to enrich the learning environment beyond the traditional setting of the classroom [11,20]. With regard to the online aspect, this relates to a variety of resources, including articles and relevant videos. I endeavour to moderate discussions (offline during the lectures and online), in order to encourage both learners who may feel less confident about their communication skills but also providing opportunity to those students who would like to practice their own skills.

**Synchronization with the students.** For each module I coordinate, every Friday I provide the students with a summary of what has been done during the current week and what is expected during the following week. This keeps the teaching staff and students synchronized, and the students know what is expected from them. In all the modules I teach, either online or on campus, I outline expectations around requirements and behaviour from the beginning of the module. Even if it is not required, I prefer to monitor the levels of participation and provide encouragement or prompts, when necessary. I provide information about extra support available at the university for techniques such as how to take exams, and developing writing skills.

**- Engaging in continuing professional development in subjects/disciplines and their pedagogy, incorporating research, scholarship and the evaluation of professional practices**

I have developed my professional practice through exchanging expertise with colleagues (**using peer observation, participation in school best practice days**), and **using student's feedback to inform and improve my own teaching practice**. As an example, in Lancaster I used to be part of the meeting "sharing good teaching practices" where I received excellent feedback for my teaching skills. My

performance was regarded as excellent and was highlighted during the program board as an example of good teaching practice (A5, K6, V3, V4).

I have served as mentor to Teaching Assistants (TAs) in both Aston and Lancaster. In Lancaster I was the General Teaching Assistant (GTA) leader who provided guidance re: teaching, learning and assessment. I coordinated a team of 6 TAs that assisted me as a GTA. At Aston, I serve as mentor to a new Teaching Associate and who is also my PhD student. I have provided guidance and advice re: university structures, school policies on teaching and learning and assessment, and peer-observed his teaching as part of my lecturer duties. I have provided feedback accordingly. Both in Aston and Lancaster I have peer-observed colleagues in their teaching activities and provided feedback. Similarly, I have been peer-observed and receive feedback accordingly. This bidirectional feedback is useful to create awareness about our own teaching and effective communication skills.

As a PhD supervisor in Aston, and a Master supervisor in Inria in France, I have been in charge of mentoring and giving feedback to these students during their research activities [6]. As a Lecturer I have been the external examiner of 5 PhD students during their vivas. As an external examiner I have given feedback corresponding to effectiveness of research, presentation and writing skills. In 2012, I was the co-chair of a PhD Latinamerican Symposium of Software Engineering. As such I was in charge of the organization of the PhD tutors who gave feedback to the PhD students in the symposium.

At the UCV, in Venezuela, I went through a two-year training as an Instructor Lecturer (Junior Lecturer) in order to be obtain my tenure position. During my training **I took the course “Teaching techniques and learning strategies in the classroom”** (in Spanish Micro-enseñanza) [21]: The course teaches skills to design and deliver material in the classroom and lab, how to open, develop, and close a lecture in an effective way. It was fully based on reflection and auto feedback received from videos of classes delivered that were filmed. Peers and the tutor of the course discussed the films to give feedback. A total of four (4) assessments were made about specific lectures I was delivering in those days. An example of the sessions in this course is the fact that I was filmed giving a lecturer in the first session of the course. At the end of the course I was filmed again. The improvement of my teaching skills from the first film to the second was substantial. I still appreciate this course.

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