

Teaching land law to land surveying students: design, challenges and successes

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Abstract

Professional Land Surveyors in South Africa are required not only to obtain knowledge and skills in technical aspects of land surveying, but also in development and land law. The Geomatics degree at the University of Cape Town has a strong tradition of cadastral law practice, research, and commentary spanning the last 80 years. This tradition continues as a primary theme of teaching in the undergraduate programme, in research endeavour, and in professional leadership.

The teaching of property law to non-lawyers is challenging but fulfilling. A varied approach straddling a number of courses taught within the programme and by other departments is adopted. Through this suite of courses, and within each course, a highly varied approach to teaching and learning is adopted.

This contribution is a reflective critique of teaching and learning experiences in courses taken by students in the Surveying stream who are most likely to register as Professional Land Surveyors after graduation, completion of a period of articles training, and successful completion of law and practice examinations. The challenges of meeting professional competencies in land law are addressed through course design, and the integration of more interactive and diverse learning tools are discussed.

1. Background

Geomatics is a term describing a range of spatial science disciplines which include skills and knowledge leading up to professional registration as land surveying, engineering surveying, photogrammetric practitioner, and geo-information science practitioner. The technologies used in geomatics are varied and continuously changing. The legal aspects, which pertain mostly to land surveying, have also undergone many changes since 1994, but are built on the foundations of case law over the last 150 years.

There are both challenges and benefits to teaching a programme such as geomatics which

includes highly technical and mathematical elements, as well as social systems and land law required to understand the humankind to land relationship. Students graduating from the South African schooling system are observed in the programme to be increasingly disadvantaged in preparation for technical and mathematical higher education programmes. The combination of soft science in the programme allows such students the opportunity to excel in such areas. School leavers entering the programme are, however, more than adequately prepared for the social aspects of university, including learning about social aspects of society as well as using social learning techniques. However, they lack exposure to a cross-section of social experience and have little understanding of land development challenges and the socio-political discourse of the day.

This paper seeks to reflect the challenges of delivering a course in land law to geomatics students, and also to explore new teaching and learning techniques in the classroom using materials prepared for a UN gender in land workshop attended by the lecturer.

2. Method

The methodology adopted is that of reflective analysis of structure, teaching tools, student ability, and course outcomes based on two full years of teaching the first semester section of the course and many years of teaching second semester section. In the second semester, a combined lecture and workshop method has been employed in the last two years in which new tools encourage a more participatory and student-led learning experience.

3. Course Structure

3.1. Aim

The aim of the Land and Cadastral Survey Law course (APG3033W) is to provide knowledge and understanding of land tenure, land law and land registration and cadastral survey law and the role of the land surveyor as a custodian of land tenure security.

3.2. Integration with other courses

The course is delivered in the third year of the four-year Honours-level BSc Geomatics programme. This course pairs with theory taught in the course Property Law, CON2027F, also taken in the third year. The Property Law course does not include any assignments, and a number of aspects required as a registered professional land surveyor are not included, necessitating a paired course taught from within Geomatics. In the first semester of the course the skills of accessing law information online and via the UCT Law Library, as well as the

skills of reading legislation and case law are conveyed as they are considered important for all Professional Land Surveyors.

In the first semester the Land and Cadastral Survey Law course includes the concept of the land parcel, cadastral surveying, the quasi-judicial role of the Land Surveyor, Land Survey Act Regulations, practical surveying guidelines, ownership and the proprietary unit, land tenure systems, the historic development of the cadastral system and surveying law, the role of case law, servitudes, mining law, curvilinear and ambulatory boundaries and the coastal zone. In the second semester, international law and law of the sea is addressed, as well as land policy, tenure reform and challenges of land delivery in the developing world. A sister course, Cadastral and Registration Projects (APG3027Z), provides practical skills and knowledge in cadastral surveying and land registration.

3.3. Delivery:

- Pre-reading – selected background reading, usually part of a book chapter or an article.
- Lectures - one hour per week – delivery of theory in modules. Comprehensive notes are handed out in hard copy and are available on Vula
- Seminars/Workshops - One hour per week – interactive afternoon class in which a particular aspect is addressed. In the second semester a range of interactive workshops are planned.
- Field Trip – a site visit is planned for the section on international law and law of the sea.
- Assignments - range from 1 hour to 4 hours per week and may include directed study, self-study, group-work, or oral presentation. All assignments contribute to the course mark and are weighted at 66% of the total.
- Set readings – a topical article or section from published material which is considered examinable.
- Tests – there are four tests which account for the remaining 44% of the course mark. There is no final examination as the logic is that the CON2027F course is entirely based on this mode of assessment, and this course is designed to complement the course design in CON2027F.

4. First semester assignments

4.1. Design

A project-based design underpins this course - the design of the assignments is based on the desired skills and knowledge outcomes:

- Ability to source law material through the physical and online library resources
- Ability to read and summarize statute law; knowledge of key statutes and application to surveying practice; awareness of key issues in development of law, such as the Integrated Coastal Management Act and Amendment Act.
- Ability to read and summarize case law; knowledge of key case law and application to surveying practice
- Ability to present orally both individually and as part of a group, with and without presentation software
- Ability to keep diary entries and delivery interim progress reports in a meeting simulation environment, as well as mentioning challenges faced and solutions found in an honest manner
- Ability to compile information in a formal document with cross-referencing
- Ability to interact in groups discussions on key land issues in South Africa today
- Ability to motivate the need for professionals to have the above skills and knowledge

4.2. Assessments

Each assignment is assessed and a mark allocated. In addition, the final question in each assignment requires students to reflect on the assignment and whether the objectives of the assignment were met, in their opinion. This allows instant feedback on problems experienced, but in all cases, although the assignments were challenging, students understand the need for the assignment and its outcomes, and can reflect their increased knowledge and skill obtained through the assignment. Some feedback is reflected in the descriptions below.

4.3. Project 1: Finding the Law

The tasks are designed to enable the students to become familiar with the resources of a Law Library: the books, journals and other publications. The students are given eight varied tasks to conduct over the course of an afternoon spent in the Law Library.

Feedback

Students found the assignment challenging, but they learnt a lot in terms of the range of resources in the law library and how to access them.

4.4. Project 2 as in 2012: The Statute Reference File

This project critiques and extends a Statute Reference File (SRF) prepared by previous students. An effective guide to National legislation and regulations that relate to landed property is produced by students working in a group. Students choose a group name as if they

are a professional practice of land surveyors.

The SRF also contains notes and texts on topics of direct interest to the practitioner – a selection of the readings recommended in this course is included. The project demands that each student acquires the skills of reading legislation and distilling the essential elements. These are presented in a cross-referenced SRF according to a standard format for entries. The project duration is five weeks. Interim measures of progress include the upkeep of a diary and presentations to the class of progress made, as well as a mini-essay exploring the student's views on the importance of a land surveyor maintaining a general knowledge of statute law. The final submission is the SRF accompanied by a group presentation, using presentation software, to the class.

Feedback

All students struggled with the language of statute law. They had access to a glossary and also online dictionaries which they used extensively. They did report that they developed their reading skills in the course of reading and summarizing the statutes and they reflected on the value of being able to read statutes, to quickly find relevant sections, and scan over those that were not relevant. They see the value of this skill for professional work, and realised that it can only be acquired through struggling in the beginning and persevering. The value of the group in encouraging each member to persevere was critical. The group cohesion was an important part of this dynamic and relied on the students' choosing their own groups rather than being placed with other students not of their choice.

It is planned to eventually publish the Statute Reference File using an online self-publisher such as Mousehand. This was a motivating factor for the student group, but the quality of the SRF is not yet at publishable stage.

4.5. Project 2: Statute Boardroom Role-play

As the Statute Reference File format had been used for a few years, the class of 2013 and 2014 used this information as a starting point for engagement with the statutes. The class was divided into groups and prepared their list of statutes for presentation in a different format. In order that students are prepared for various styles of workplace interactions, a boardroom style "partner" presentation was required. Students laid out the desks in boardroom style and reported the most important aspects of each Act to their peers in the group. The rest of the class listened in.

Feedback

The students felt that this method of presentation was much less time-consuming than the SRF and they also appreciated the SRF as a point of entry. They still found the statutes hard to read but recognized that their skills in reading improved as well as their ability to distil important sections from the Acts. The boardroom presentation style was preferred over presentations to the class in which time is inevitably wasted in preparing presentations using software.

4.6. Project 3: Case law

Students are allocated a case summary upon which to report. An oral presentation is prepared for delivery to the class. Students prepare to answer questions of clarity as well as questions on the impact and currency of the case today. Presentations are oral only (no computer presentation software). The white or green board are used to illustrate the case.

Feedback

Reading the case summaries was a challenge to all the students. Understanding the legal language and the logic of the arguments was a skill they felt that they developed during the project. They found the case law summary documents available on Vula to be invaluable in understanding the key points of each case.

5. Second Semester Assignments

5.1. Project 4: International Law and Law of the Sea

Part 1: Scenarios in International Law and Law of the Sea

Four scenarios involving international law issues are presented. Students are to prepared answers to two of these using self-study prior to any lectures on the subject. The assignment is made available prior to the mid-year vacation. The aim is to facilitate interest in the topic prior to the formal delivery of the module.

Part 2: – Contesting International Boundaries at Sea

This assignment is conducted in class. Students are handed a map portion covering the Mozambique Channel. They need to assess the scale of the map and denote the 200 nautical mile boundary around each nation, including Mozambique and the island nations of Madagascar, France, Seychelles, and Comores. Overlapping claims are then evident. The method of equidistance is explained and is used to derive international boundaries at sea in contested areas. This task is a graphical illustration of off shore rights and resolution of

disputes.

Feedback

Students enjoyed the practical task of defining off-shore rights in the Mozambique channel in Part 1. The tasks of Part 1 were a challenge to the students, but many accessed the notes on international law from Vula and used these in answering the questions. The construction of midline boundaries proved very challenging for many students. Determining the scale of the printed map from first principles is daunting. Simple tasks of drawing a line around the coast a certain distance from the shore and constructing lines perpendicular to the shore revealed very weak spatial and visualisation abilities. After Part 2, the students were well aware of the complexities of international law and law of the sea and so attendance at the lectures was of increased value.

5.2. Project 5: Land Reform Essay

This is a major essay of 2000 words scheduled over two weeks, but made available to the students prior to the mid-year vacation. The aim of the essay is to expose students to contemporary debates over land in South Africa, as well as to hone research and essay writing skills. The topics for the essay vary annually and there are not right or wrong answers, since the subject matter is always chosen to expose contentious issues. In 2012 the essay topic was *“Land ownership in South Africa: politics, lies, statistics and history: A land surveyor’s perspective on the debate as to who owns (or should own) South Africa”*. In 2013 the essay topic was *“Pluralism in land rights and tenure in South Africa will pluralism still be with us in 2060? An exploration into the diversity and durability of land rights forms in South Africa.”*

Key references are given and include articles in the press, government policy documents, books, and legislation. The completion of a lengthy and complex essay reveals those with reading, writing and analytical skills. In many cases, students who perform badly in technical subjects outshine their peers in this assignment building confidence and encouraging them in that they can see a future in the profession of Geomatics in dealing with land reform and development issues if they are not interested in technical surveying aspects.

5.3. Field Trip

A field trip exposes students to the work of the Navy in international law and law of the sea. Students visit the Hydrographic Survey Office in Silvermine, as well as the SAS Protea. This annual field trip is a highlight of the course as many students have not been to Simons Town and many have never boarded an offshore vessel before. It exposes students to another

branch of surveying.

6. Innovative Design of Contact Time in the Fourth Quarter

Since the design of the first, second and third quarter contact time remained unchanged for many years, only the contact time design for the fourth quarter will be discussed here. A new range of teaching/learning techniques are employed to improve student learning experience and outcomes. This proved necessary as the time tabled contact time is Friday afternoons and at this stage of the year the students' interest is flagging.

The lectures are the standard 45 minute lecture accompanied with printed notes. Key aspects from the notes will be highlighted. Presentation software will be used.

The materials used in the workshops are from the UN Habitat Workshop on *Improving gender equality and grassroots participation through good land governance*. This material has been developed by the UN Habitat Global Land Tool Network (GLTN). The author attended such a workshop which had a "train the trainers" emphasis and participants were encouraged to use the materials provided.

6.1. Design:

Week 21:

Lecture: Module 9 - The land question in South Africa

Workshop 1: Good land governance

- **Questionnaire** - corruption in land administration – to judge what a student's perceptions are on corruption and when/if it is justified .
- **Discussion/reflection** - what is good land governance? This builds on knowledge from the questionnaire since good governance excludes corruption and should design to mitigate against it.
- **Rapid fire** – students break into pairs. Each pair is given a word pair such as governance vs. government. Students may search the internet/prepare for 5 min then return to the classroom and present the terms, and how they are different, to the class.
- **Presentation** of GG framework (GG framework from Whittal (2011) as well as framework of UN Habitat in Handout 2)
- **Activity** – breakaway and work on a 3 min cameo on an aspect of good governance in the classroom.

Week 22:

Workshop 2: Power

- **Questionnaire** – what is your power as a Geomatics land law student?
- **Discussion and reflection** - acknowledging the role of power in process. Discussion as to whether the use of power in organisations is always negative. The power students will likely have as Professional Land Surveyors particularly in their organisations, in the development area and in the public arena.

Workshop 3: Gender

- **Discussion and reflection** – Meaning of gender, role of gender in your life (Handout 4), generational aspects of gender, gender identity. How has gender affected your life? Is there a gendered aspect to BSc Geomatics, and particularly this course? Are there gendered roles in land in SA? Class discussion and use of flip charts.
- **Activity** – breakaway and work on a 3 minute cameo on gender discrimination in Geomatics at UCT. Present to the class.
- **Active listening** workshop/role-play – in adjudication, do you listen actively?

Week 23:

Lecture: Module 10 part 1: land Policy in South Africa

Workshop 4: Conflict resolution

- **Scenario** role play (Session 4 Handout 7) - conflict resolution – multiple land claims – each person has a hand-out and a role to play. Forum in which Judge presides (with own agenda) and each claimant and official has a chance to speak – all have own agendas.
- **Discussion/reflection** on goal setting, contested goals, hidden agendas and power. The value of adjudication as opposed to litigation is discussed. The role of the Professional Land Surveyor in the field court as an adjudicator is highlighted.

Week 24:

Lecture: Module 10 part 2: land Policy in South Africa

Workshop 5: Challenges to land reform

- **Discussion** on the different meanings of land in SA today (heritage, home/ancestors, wealth, power, commodity, community, collateral, place, etc. (Williamson et al, 2010))
- **Breakaway** into groups of four: organise the key challenges to land reform in order from most challenging (hardest to solve) to least challenging (easiest to solve) (Module 10 notes)
- Feedback and reflection.

6.2. Discussion

The design of the last quarter's contact time proved fun and interesting for both students and lecturer. It is this section of the course which has, historically, been the most tedious to deliver and for students to engage with. The former "stand and deliver" teaching style, compounded by the Friday afternoon lecture slots (6th-8th periods), diluted the impact of the content and the learning experience. There was a marked improvement in interest, engagement and learning. The role plays were popular and so much fun that in 2012 others from outside of the class asked to join in and in 2013 I invited some postgraduate students and fourth year students to stand in for those who were ill on the day. There feedback was very positive although some students found the level of engagement and participation challenging.

7. Course and lecturer assessments on Vula

Each course is assessed, as well as each lecturer, via an anonymous Vula-based questionnaire. This course has achieved average ratings of 4/5 for course aspects and 5/5 for lecturing aspects since 2008. When comparing 2008-2011 against 2012/13, the lecturer score for the second semester increased from 4.5 to 5. The high scores for this course reflect student satisfaction both with the course design and the ability of the lecturers.

8. Reflection and Conclusions

The experience of this course and adopting varied approaches to contact time will now be extended in the new course, APG4012S, which covers the business and professional aspects of Geomatics. It has become clear that, when contact time involves many hours in the afternoon in the classroom, many aspects of the interaction need to vary. Some aspects which have been identified are:

- change of media: lecture, white/green board, video clip, hard copy, flip charts
- change of social space: lecturer/class, individual in a group, one-to-one, alone
- change of language style: formal, consultative, casual, intimate (Price et al, 2009)
- change of personal linkage: generic material, specific material, personal material - link to self (e.g. gender in general, gender in SA, impact of gender in my family)
- change of action: listening/watching, calculating, reading, discussing, convincing/explaining, researching, presenting, reviewing/analyzing content, remembering/reflecting, predicting/planning.
- change of pace: mix of fast pace activities (e.g. rapid fire 1 min presentations) with slower

pace activities

- change of sound: volume of speaking, who is speaking, silence, individual vs. group discussion, listening to a recording
- change of visual interaction: lecturer, reading a handout, surfing the internet, presentation projection screen, other's faces.

Changes of engagement such as those employed in the land law course in Geomatics throughout an afternoon of 3-5 hours of engagement have been shown to be highly valuable to both learners and educators and can be highly recommended.

9. References

- Price, M., Kallam, M., Love, J. 2009, The Learning Styles of Native American Students and Implications for Classroom Practice, *Eighth Native American Symposium and Film Festival: Images, Imaginations, and Beyond*. Viewed 29 March 2014, <<http://homepages.se.edu/nas/files/2013/03/NAS-2009-Proceedings-M-Price.pdf>>
- United Nations Human Settlements Programme (UN HABITAT), 2010, *A training package: Improving gender equality and grassroots participation through good land governance*, UNON, Publishing Services Section, Nairobi.
- Whittal, J, 2011, The potential use of cellular phone technology in maintaining an up-to-date register of land transactions for the urban poor, *Potchefstroom Electronic Law Journal (PER)*, 14(3), Pages: 162-194.
- Williamson I., Enemark S., Wallace J., Rajabifard A., 2010, *Land Administration for Sustainable Development*, ESRI Press Academic, Redlands, California.