Structured Knowledge Base and teaching Essentials on Responsible Land Administration

Assessment of Uses and Users

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Published in:
FIG Working Week 2021 20-25 June

Publication date:
2021

Document Version
Publisher's PDF, also known as Version of record

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Key words: Capacity development, curricula development, curricula evaluation, education, land, land administration, responsible land administration, structured knowledge base, surveying, surveying education, teaching essentials, teaching essentials.

SUMMARY

Teaching and capacity development of professionals in the land sector is vital in the improvement of living conditions and achieving sustainable development. The Global Land Tool Network (GLTN) since 2019 designed and developed the teaching and learning material on responsible land administration. This was after various researchers and experts in the land sector echoed the need for supporting the knowledge acquisition and capacity development of professionals. The courses are freely accessible to interested institutions and individuals. Material covers all aspects of land administration, from tenure, land value, land use land development. The teaching essentials were designed through an intensive peer review process, ensuring that the latest information on land administration is made available to teachers and learners as part of university education and capacity development in land administration. This paper is relevant because it is a renewed effort re-emphasize the availability of these land administration teaching/learning resources which is freely accessible to all. The paper answers the question, who is willing to use or are already using these resources, and for what purpose? The paper, apart from presenting narratives for grasping the nature and relevance of the teaching essentials, uses the GLTN Dashboard analytics to present the current state of its usage. Based on the scenarios identified, the paper provides recommendations in support of actual use and future improvements.

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1. THE SEARCH FOR IMPROVED KNOWLEDGE IN THE LAND SECTOR

Land is the basis of economies of most countries in the Global South. It is in very high demand for fuel, housing, food, dwellings, and natural resources. To use land effectively and efficiently as a key factor in the development of these countries, its secure access and sustainable use is of crucial concern. This requires that those in government make appropriate decisions, citizens are educated on their land rights, and practitioners in the land sector have the requisite knowledge to do their job in an ever changing world. Thus, the enhancement of knowledge, capacity building and capacity development efforts on land issues must be scaled up.

The quest for better education, capacity building and capacity development in the land sector have always been considered essential in the training and development of land professionals. However, it demands efforts at generating more informed knowledge to enhance practices within the land sector of many countries. There is a requirement for engaging in missions and commitments to improve the living conditions of societies; and to build "a more just, a more peaceful and more sustainable world" (Magel, 2005: 1). To directly engage in land related knowledge generation and improvement, Magel (2005: 4) called for better education of land professionals to "be future oriented and comprehensive" and embrace "the whole environment of neighbouring disciplines and on networking and collaboration with them." Hence, the search for improved knowledge on land issues is a decadelong affair that continues to demand urgent changes on how practitioners and land administration systems work. Enemark's (2009: 1) expressed this concern in a more detailed manner when he (more than a decade ago) posed the question "Is the role of the surveyors changing?" Answering this question in his own words, he (Enemark, 2009: 1) noted that:

"In a global perspective the answer will be 'Yes'. There is a big swing that could be entitled 'From Measurement to Management'. This does not imply that measurement is no longer a relevant discipline to surveying. But it does imply that the focus of the surveying profession is changing from being very much related to doing measurements to now being increasingly related to management of the measurement processes, the geospatial data, and the property and land-use regimes. In surveying education there are a range of other challenges to be faced. These relate to the focus on learning to learn; the need for flexible curriculum to deal with constant change; the move towards introducing virtual academy; the demand for creating a quality culture; and the perspective of lifelong learning perspective."

There is a whole world of revelations from Enemark's (2009) statement above. Three critical inferences that can be drawn from the statement include that:

1. Emerging land related challenges require new ways of understanding them and resolving them. Hence, it requires possible change for surveyors (being one of the key players in the land sector) to broaden beyond their traditional measurement tasks to that of management.
2. To ensure that the change from measurement to management is successful and leads to its expected objectives (i.e., solve land related problems in societies), renewed forms of knowledge building and learning through education and capacity development are mandatory.
3. Any forms of learning capable of supporting the new change from measurement to management requires a "focus on learning to learn; the need for flexible curriculum to deal with constant change; the move towards introducing virtual academy; the demand for creating a quality culture; and the perspective of lifelong learning perspective" (Enemark, 2009: 1).

Engaging in new ways of understanding and resolving land related problems (including new was of learning) is itself a challenge. It is an educational and capacity development challenge which requires well-tailored curricula or training materials. Educational teaching and learning resources are particularly needed in developing countries to scale up the knowledge base for ensuring responsible practices in the governance of land sector activities for sustainable development outcomes. For instance, the implementation of ongoing and future land interventions (e.g., land policy development, land reforms, land management programmes, and the setting up of land administration systems, etc.) in many developing countries require appropriate knowledge. In many of these countries, there is an acute shortage of land professionals to lead the implementation of land programmes meant to improve the living conditions of citizens. Therefore, the implementation of improved knowledge capacity activities in the land sector remains a work-in-progress.

Many studies recognise the need for knowledge building and sharing (dissemination) as a means of improving capacities of actors that operate in the land sector (see Magel, 2015; Enemark, 2009; Chigbu and Mohammed, 2020; du Plessis et al., 2020; Chigbu et al., 2020; de Vries, 2021). In recognition of the importance of better education and capacity development in various institutions in the land sector (e.g., government agencies, universities, and other institutions of learning), this paper provides details of a specific resource designed to ensure knowledge building and teaching in various aspects of land administration. This teaching and learning resource, *structured knowledge base (SKB) teaching essentials on responsible land administration (RLA)*, was developed by the Global Land Tool Network (GLTN). The objective of this paper is twofold: (1) re-emphasize the availability of these land administration teaching/learning resources which is freely available to all; (2) answer the question, who is willing to use or are already using these resources, and for what purpose? The paper approaches this task by describing the GLTN structured knowledge base (SKB) teaching essentials on responsible land administration. This is followed by a description of the methods of its assessment. Next is the presentation of evidence of who and how it is being used as at today;

then followed by a discussion of how actors in the global land sector can be engaged to embrace its usage as a tool for land administration education.

2. WHY DEVELOP A SKB TEACHING ESSENTIALS ON RESPONSIBLE LAND ADMINISTRATION (RLA)?

The drivers for the change from "Measurement to Management", as referred to above, relate to technology development and the global agenda on Sustainable Development. Both drivers have evolved over the last two-three decades and have reach a stage where the impact on land administration and governance discipline is significant.

Technology development is the major driving force in changing the face of the spatial information world. The GPS/GNSS technologies for measuring have revolutionised the traditional surveying discipline, and the high-resolution satellite imagery, drones and lidar have revolutionised the mapping discipline. The technologies for collection and storage of large data sets and for their management, analysis and manipulation arguably have revolutionised the traditional field of GIS towards advanced concepts of Spatial Information Management. The World Bank has recently published a guide entitled "New Technology and Emerging Trends: The State of Play for Land Administration" (World Bank, 2017) that provides decision support to designers of Land Administration programs requiring guidance on what new and emerging technologies could be effectively adopted and integrated within their programs. The Guide reviews and assesses new technology solutions that are currently operating successfully in land administration systems, but also emerging disruptive technologies that could significantly accelerate the land administration processes.

The 2030 Global Agenda provides a range of goals and targets that can never be achieved without having good land governance and well-functioning countrywide land administration solutions in place. The Sustainable Development Goals (SDGs) provide a framework around which governments, especially in developing countries, can develop policies and encourage overseas aid programmes that are designed to alleviate poverty and improve the lives of the poor. The SDGs also represent a rallying point for NGOs to hold governments to account. In other words, the SDGs are a key driver for countries throughout the world – and especially developing countries – to develop adequate and accountable land policies and regulatory frameworks for meeting the goals. Furthermore, it should be recognised that, next to the SDGs, the wider global agenda includes a range of global issues such as responsible governance of tenure (FAO, 2016), human rights and equity, climate change and natural disasters, rapid urbanisation, and land conflict situations.

Most developing countries are struggling to find remedies for their many land problems that are often causing land conflicts, reducing investments and economic development, and preventing countries from reaching their true potential. Existing investments in land administration have been built on legacy approaches, have been fragmented and have not delivered the required pervasive changes and improvements at scale. While a wealth of literature emphasizes the need for security of tenure and elaborates on its benefits, including the opportunities to contribute significantly to poverty reduction and sustainable development, the conventional approaches to land administration do not make this a reality. The standard

solutions have not helped the most needy - the poor and disadvantaged - that have no security of tenure. In fact, the beneficiaries have often been the elite and organizations involved in land grabbing (Enemark and McLaren, 2019). The concept of responsible land administration as presented and unfolded in the GLTN Structured Knowledge Base offers a guidance for building the necessary capacity of teaching, learning and capacity development in this new and emerging field.

The GLTN Structured Knowledge Base (SKB) enables the opportunity to renew and update existing university programs within field of land administration and governance. The SKB is designed in a way that will enable a direct use as lecture courses at the level of third year of studies. However, the SKB may also be used as a source for redesigning existing courses by incorporating various relevant elements and, thereby, make the courses reflect the conceptual approach to responsible land administration within a specific country context. The SKB may also be used as a basis for designing programs to be offered as Continuing Professional Development (CPD) opportunities for land professionals who need to upgrade their competence to meet the new challenges within the land administration and governance discipline. This relates to land professionals engaged in professional practice as well as public administration at all managerial levels. Finally, the SKB may, of course, be used by any professional as a simple handbook for investigating specific issues whenever relevant or necessary. The SKB includes a huge range of on-line references and, thereby, enables a solid base for self-studies.

For university studies, the SKB is well designed for "Blended" or "Hybrid" Learning activities that represent a significant recent trend in professional surveying education (Mitchell, et al., 2020). This approach combines traditional lecture courses with digital learning material to be used as self-studies within a specific context. It adds a "Learning to Learn" component to the traditional mix of theory and practice. This aspect can be further promoted through implementing project-organised assignments that fits very well to the interdisciplinary context of surveying education and meets the need to address issues and problems in a real world context (Enemark, 2016). This problem-based approach is also found in the SKB by structuring the text under relevant questions to be analysed and addressed rather than using traditional textbook headings.

Capacity development is not only about education and training, but it also relates to the broader social system within which people and organisations function. Such institutional development refers to the internal structure, policies and procedures that determine an organization's effectiveness (UNDP, 2016). In most developing countries, local authorities and rural organisations struggle to attract staff capable of performing the required tasks as these human resources are simply not available. In this perspective of capacity development, the SKB can be used in a whole range of ways by providing the foundation for both short and long terms courses as well as training the trainers activities that can facilitate an appropriate understanding of Responsible Land Administration to achieve the overall 2030 Global Agenda.

3. GLTN's Structured Knowledge Base on Teaching Essentials on RLA

Background: Education and capacity development on land issues is challenging for both individuals and institutions working to improve the livelihoods and security of the world's

poorest people. “This challenge deeply affects the implementation of projects, programmes and activities, and the ability to sustain them or to build on and take them further GLTN” (2014: 1). Over a decade, the GLTN[1] has dedicated a considerable number of resources to the improvement in making resources available for the education and capacitation of land professionals. A major aspect of the GLTN effort at improving knowledge/skills capacities in land, is development of *“Responsible Land Administration Teaching Essentials - A Structured Knowledge Base*” which has been available worldwide in beta since 2019.[2]

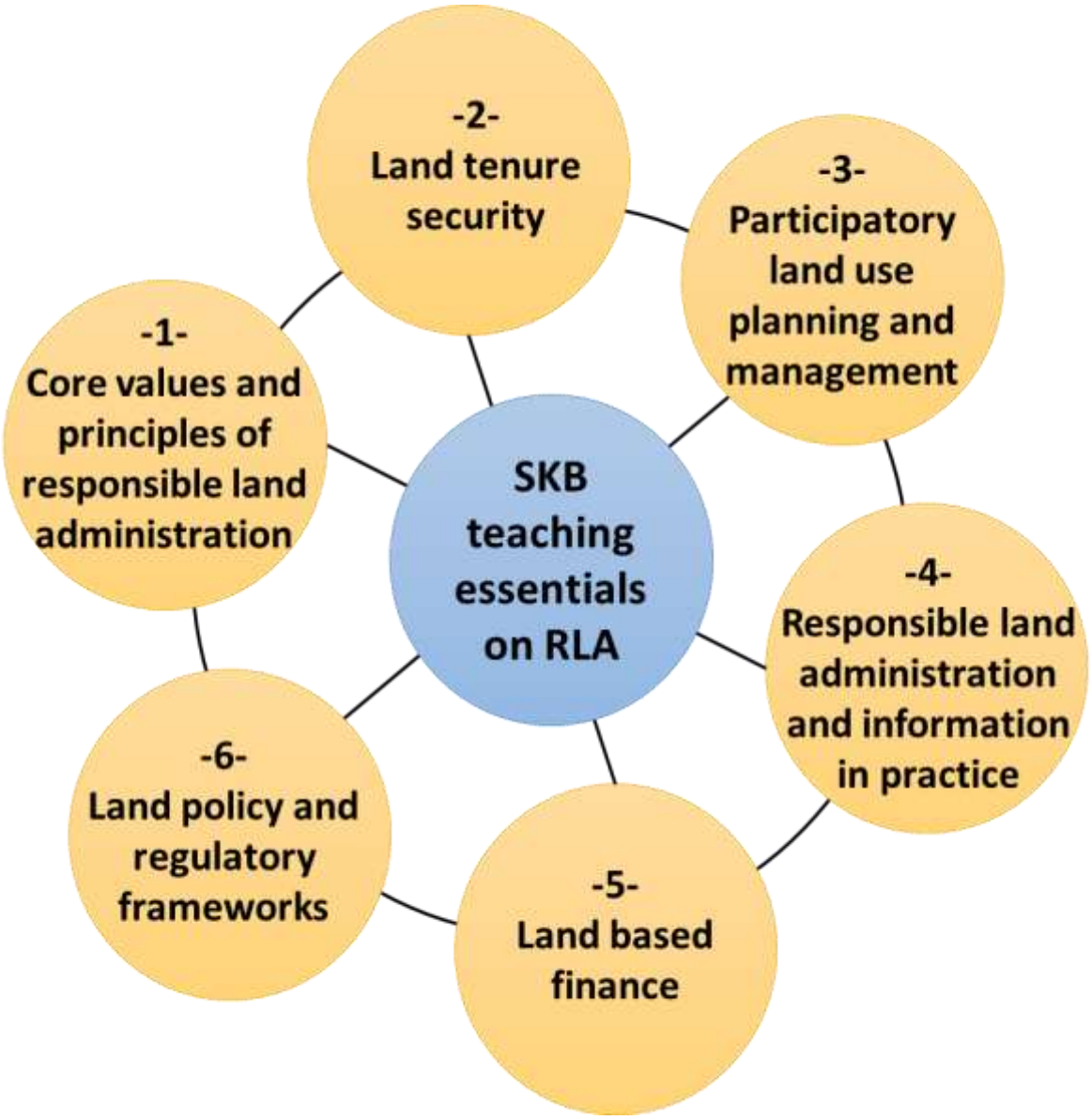
Although there is considerable knowledge available on land related issues and innovative land tools and practices, most of this information is partly unknown and/or fragmented among university teachers, or it is hidden within broader land related curricula. To redress this, partners within GLTN’s International Research and Training Institutions Cluster prepared the SKB to support the design and teaching of Responsible Land Administration curricula at universities and training institutions.

Content: The GLTN developed the structured knowledge base (teaching essentials) on responsible land administration. The teaching essentials contains six modules (see Figure 1), developed under the supervision of senior academics and the GLTN partners, all leaders in their respective fields.

Figure 1: Modular components of the SKB teaching essentials on RLA

[1] A dynamic and multisectoral alliance of international partners committed to increasing access to land and tenure security for all, with a particular focus on the poor, women, and youth. The Network’s partners include international rural and urban civil society organizations, research and training institutions, bilateral and multilateral organizations, and international professional bodies. For details about GLTN, visit www.gltn.net

[2] These teaching essentials have been collectively launched and are already in use, in beta format, on the Global Land Tool Network (GLTN) e-learning platform available at https://elearning.gltn.net/ The teaching essentials have been highlighted in papers presented at a few events, including FIG Working Weeks and the World Bank Conference on Land and Poverty.



As shown in Figure 1, the knowledge base covers the following modules: (1) Core values and principles of responsible land administration; (2) Land tenure security; (3) Participatory land use planning and management; (4) Responsible land administration and information in practice; (5) Land-based finance; and (6) Land policy and regulatory frameworks. The intention is for this knowledge base to be flexibly utilised for a range of education, training, and research activities at all levels.

Level and Duration: For specific use in academic teaching, each module is structured to support approximately 50 hours of study load (2 ECTS) at 3rd year university level, divided into 4 or 5 lessons, with each comprising approximately 3 hours of classroom teaching and approximately 7 hours of teacher directed self- study. Although each module is structured as a 3rd year university subject of 2 ECTS, the knowledge base can be used for a whole range of

education, training, and research activities at all levels. The Modules are structured to be nested such that the learning can explore Module 1 on its own, or Module 1 in combination with any or all the other Modules. Similarly, a teacher or trainer can use individual Modules to support their classes or all the Modules if they are relevant. Teachers and trainers who use these materials are encouraged to add case studies, class discussion and/or class exercises to complement the material, depending on need and context. The material is well suited for adaptation using an 'active learning' approach. The SKB teaching essentials is intended as a resource for teaching and training, either in parts or as a whole. They are open source and available to be incorporated (as a whole or via some components) into existing programmes, or to form the basis of new curricula. In response to popular demand, they have also been translated into French.

Authorship of the SKB Teaching Essentials: The authorship of the SKB teaching essentials is diverse. The authorship of each of the modules is presented below:

- Module 1 - Core Values and Principles of Responsible Land Administration: This module was co-authored by David Mitchell, Siraj Sait, Jean du Plessis and Agnes Mwasumbi.
- Module 2 - Land Tenure Security: This module was authored by Grenville Barnes.
- Module 3: Participatory Land Use Planning and Management: This module was co-authored by Asad Mohammed.
- Module 4: Responsible Land Administration and Information in Practice: This module was co-authored by Jaap Zevenbergen and Dimo Todorovski.
- Module 5: Land Based Finance: This module was authored by M Siraj Sait.
- Module 6: Land Policy and Regulatory Frameworks: This module was authored by Stig Enemark.

The nature of the authorship shown above underlines the academic level of the SKB teaching essentials. All the module authors are professors teaching (researching) in universities located in Europe, North America, Africa, and Australia.

Terms of Usage: The modules have been peer reviewed and are made available here in Beta version for review and use by interested academics, teachers, and trainers in the design and teaching of Responsible Land Administration programmes, courses, mini-courses, lectures, or training. The modules are in PDF version for easy downloading. They can be freely used for teaching, training, or learning purposes provided due credit is given to UN-Habitat, GLTN and the module authors.[3] The SKB teaching essentials is a living document. Hence, the GLTN appreciates the receipt of users' impressions and ideas via a feedback form.[4] In addition, the GLTN encourages potential contributors to provide and identify opportunities for improving the structured knowledge base.

[3] The SKB teaching essentials are free to all users in accordance with the Creative Commons Licence available at https://creativecommons.org/licenses/by-nc-sa/3.0/

[4] The feedback form is available at https://docs.google.com/forms/d/e/1FAIpQLScMQYpnDvD51gcsCg2zLn1KjJQKIGZf4zwjjSFaWfmCsoM-5g/viewform

Getting to know the Uses and Users of the SKB Teaching Essentials: The goal of developing the SKB teaching essentials is to achieve increased knowledge and utilisation of better structured learning and teaching resources in land administration. Two years after the inclusion of the SKB teaching essentials on the e-learning platform of GLTN, there is need to grasp the full extent of the use of the SKB. It is also important to engage with the users of the resources (and what they use it for) to collate their recommendations for its improvements. The following sections of this paper presents the approaches used to collate these data, followed by a presentation of the findings.

4. METHODS FOR THE USE ASSESSMENT OF THE SKB TEACHING ESSENTIALS

Two online analytical tools were used to communicate, and source information related to who is interested in using the SKB Teaching Essentials, what aspects of interest, and how it is being used in real time. The *GLTN e-Learning Dashboard Analytics*[5] allowed for tracking ongoing activities on the GLTN e-learning portal. The use of *Typeform Survey*[6] allowed for the taking a survey and analysing potential users. These tools are explained here.

GLTN Dashboard Analytics: The GLTN Dashboard is an inbuilt analytical tool available in the GLTN e-learning portal to monitor the activities on the website. The GLTN Dashboard monitors in-website activities by collecting and analysing usage data related to user visitor location, average time spent by learners and teachers, device usage, resource participation, browser usage, time spent on page per resource, and many more. Apart from the SKB teaching essentials, there are six other available courses (or learning resources) on the GLTN e-learning platform. The other six learning resources[7] on the e-learning platform include:

- Land-based Finance: This contains nine instructional videos on a range of tools by which local authorities can leverage land to expand their revenue base, to finance urban development and the delivery of essential services to all. For details on land-based finance, see GLTN (2016a).
- Gender Evaluation Criteria or GEC: This contains four-module course designed to deliver key land and gender evaluation skills. For details on GEC, see GLTN (2016b).
- Social Tenure Domain Model or STDM: This contains 12 training video episodes that teaches the use of a flexible, pro-poor, gender-inclusive and participatory land information system to record of people-to-land relationships. For details on STDM, see Griffith-Charles et al. (2015).
- Tenure Responsive Land Use Planning or TR-LUP: This is a five-module course. It covers key aspects of tenure responsive land use planning. For details on TR-LUP, see Chigbu et al. (2016).

[5] GLTN's real-time web analytics for monitoring course/module usage on its e-learning website.

[6] An independent online software for online form building and online surveys.

[7] These learning resources constitute courses on the GLTN e-learning website. Together with the SKB teaching essentials, there are seven of them.

- NELGA Francophone Course Modules:[8] This contains four modules on various aspects of land issues from the context of the Network of Excellence in Land Governance (NELGA)[9] from the Francophone Africa.
- Matériel Didactique Relatif à une Administration Foncière Responsible (Didactic Material Relating to a Responsible Land Administration): This resource is the French version of the SKB teaching essentials.[10]

The GLTN Dashboard allowed for discerning data about how the usage of the SKB Teaching Essentials on RLA compares with other GLTN e-learning resources on the GLTN e-learning platform. The limitation of the GLTB Dashboard is that its analytics are based on data collected between the months of January and February 2021. While a two month data is weak for making any conclusions concerning the scenario of the usage of the SKB teaching essentials, it does provide an understanding of how users' activities are tracked on the GLTN Dashboard.

Typeform Survey: A *Typeform*[11] survey was conducted to identify and engage existing and potential SKB user institutions and individuals. *Typeform* as an online based tool and platform for data collection and analysis. It uses people-friendly forms and surveys to collect data. It is possible to turn a list of questions into a conversation using *Typeform*. This was why it provided a better opportunity for collating data that identify potential users of the SKB. *Typeform* is integrated with *Google Analytics*[12] which allows for analysing data from the queries as well as the traffic of respondents to the questions on the website. The procedure of data collection included creating a *Typeform* questionnaire based on the four queries mentioned. The GLTN Secretariat shared the links to the queries with partners and other interested stakeholders. The response to the questions was then automatically collected and analysed using the in-built analytical tools in *Typeform*.

The GLTN partners were automatically considered as both current and potential user institutions. Methods used in selecting the survey participants were both random and purposive. The random selection was domain based – that is, a situation where the link of the survey was announced online for interested individual or institutions to participate. The purposive selection involved a selection of land administration teaching institutions known to the researchers. The survey focused on four critical queries relevant for collating data necessary for discerning the status of the users of the SKB teaching essentials. The four main questions in the survey include:

1. What type of institution is your organization?
2. What aspect of the module in the responsible land administration essential tools do you think your organization would lie to adapt or use?
3. What is the name of your organization?

[8] No formal publication, but details are available on the GLTN e-learning website.
[9] NELGA is a partnership of leading African universities and research institutions with proven leadership in education, training, and research on land governance. Currently NELGA has more than 50 partner institutions across Africa.
[10] No formal publication, but details are available on the GLTN e-learning website.
[11] Typeform is an online survey platform located at https://admin.typeform.com/
[12] Google Analytics is a web analytics service offered by Google that tracks and reports website traffic.

4. If you would like the GLTN to contact you to engage further on this project, please level your email address.[13]

The first query allowed for collating data on the names of institutions either using or willing to use the SKB. The second allowed for identifying the curricula interests of the individuals or institutions. The third query enabled the identification of the individuals or institutions by name. The fourth (and final) query led to access the contact details (only emails) for follow-up on the outcome of the survey.

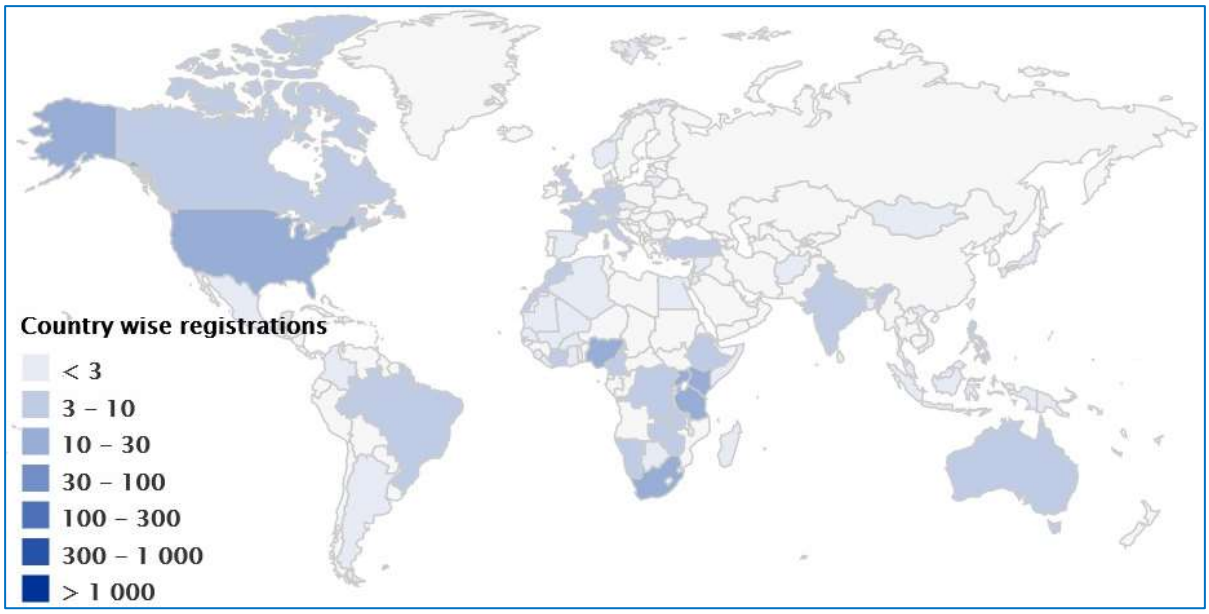
5. PERFORMANCE OF SKB USING GLTN DASHBOARD ANALYTICS AND TYPEFORM CRITICAL OUTPUT ANALYSIS

The GLTN Dashboard analytics helped to analyse data regarding the performance of the SKB teaching essentials in the context of course registration by teacher and learners (i.e., users), country-wise registration, course participation (measured by enrolment and completion), and average time spent by learners and teachers alike on a particular course. Other data output from the GLTN Dashboard includes device and browser statistics, among many others. For this paper only the relevant analytics have been derived.
The critical output analysis from Typeform was used to discern the respondents' preference (in terms of use) of the SKB modules, identify the categories of institutions interested or engaged in the use of the SKB, and the names of the institutions. The following graphics represent the overall outlook of the performance of the SKB teaching essentials.

GLTN Dashboard Indicates Wide Geographical Interest, Low Course Enrolment and No Completion of the Courses: Figure 2 shows that registration for the SKB teaching essentials have been received from 72 countries. This reflects an impressive geographical coverage and may be indicative of the geographical interest in the course.

Figure 2: Country-wise registration

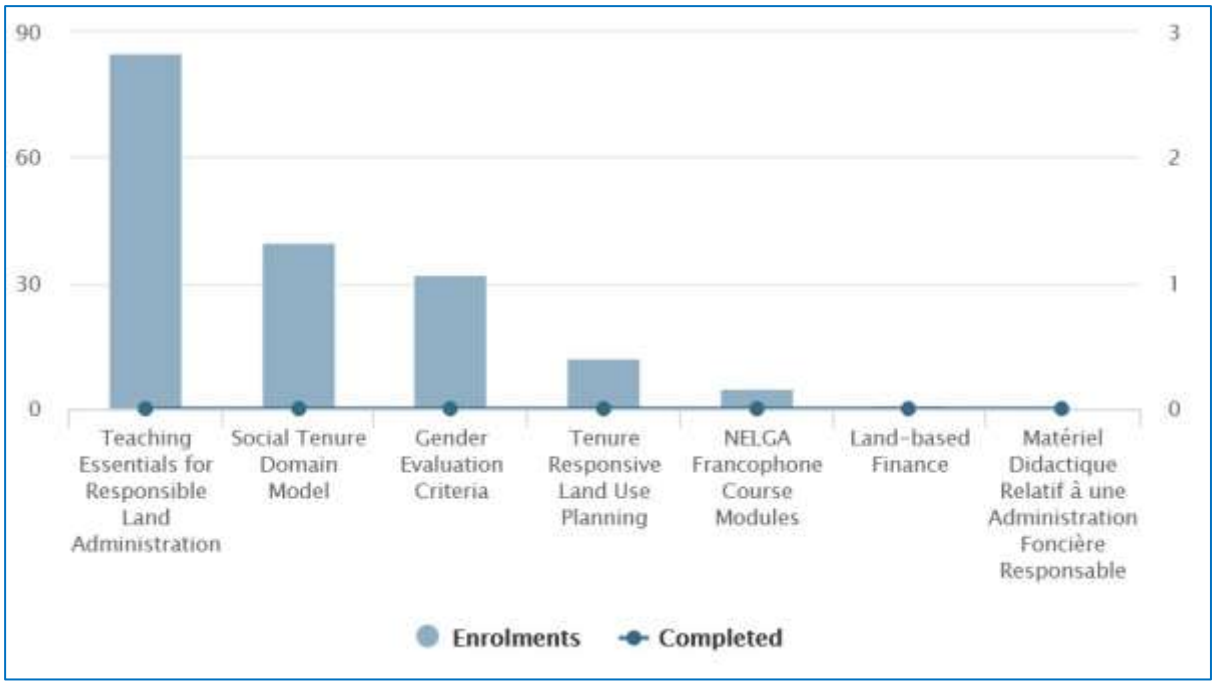
[13] This query was introduced to enable a follow-up with participants on future developments and direct interactions on the SKB teaching essentials on RLA.



The most registration are from Kenya (29), United States (15), Tanzania and South Africa (14 each), Nigeria (13), Morocco and Namibia (7 each), DR Congo (6), Cameroon and Zambia (5 each), Canada, Italy, and Australia (4 each); Turkey, Ivory Coast, India and Brazil (3 each). Most of the other countries have 1-2 registrations each. These data can allow the GLTN to have an idea of the countries to invest teaching and learning resources.

In comparison to other courses (Figure 3), the SKB teaching essentials has high enrolment number of 85. The other courses had 40 (STDM), 12 (GEC), 12 (TR-LUP), 5 (NELGA Francophone courses and 0 (land-based finance and the SKB French version).

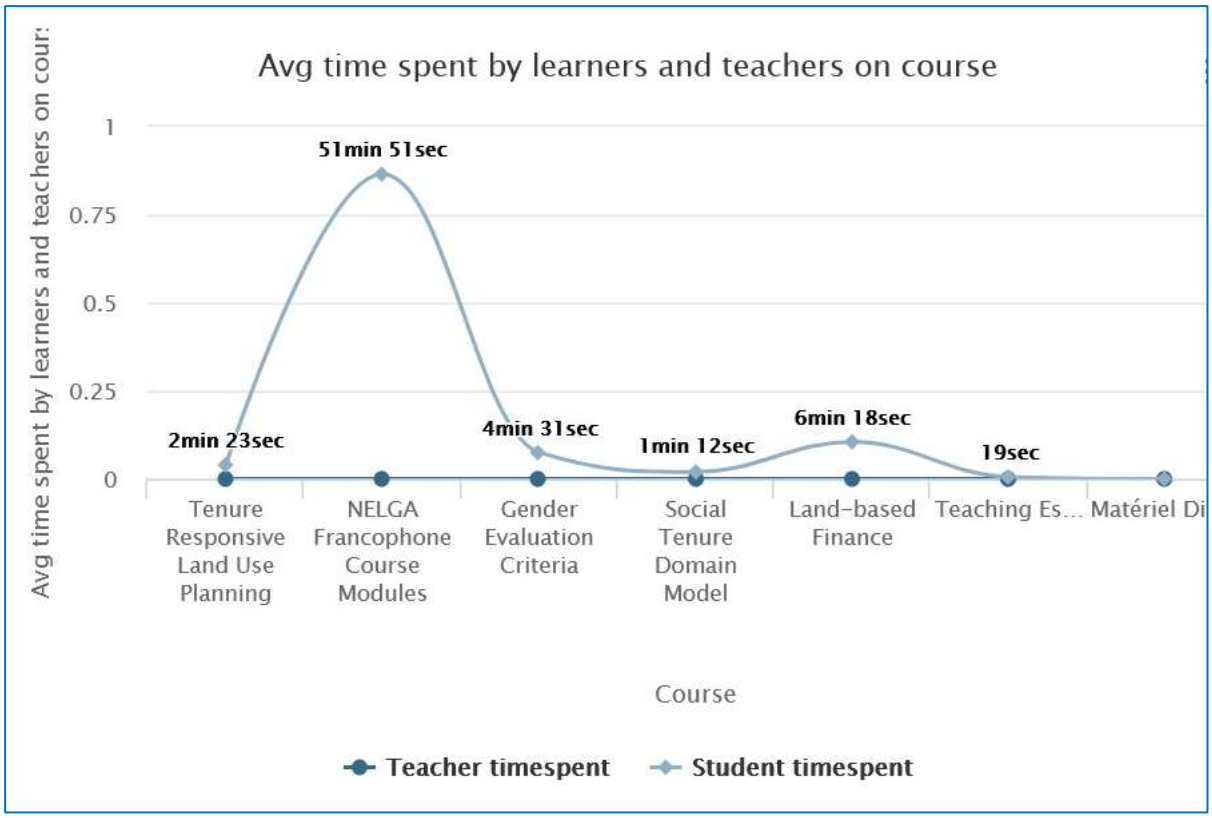
Figure 3: Course enrolment or participation and completion



Despite the level of course enrolment recorded, the course completion for all courses is zero (0). It is difficult to interpret why this is the case. Possible reasons could be: (1) Learners are not passing the tests for course completion. (2) Learners are unable to easily navigate through the e-learning website. (3) The courses are simply not interesting to learners. The implication of these findings is that the GLTN needs to conduct an evaluation of the didactical aspect of the courses to ensure that they are engaging and participatory in nature.

The issue of how engaging the courses could also be judged by way of the average time spent by learners and teachers on courses (Figure 4). In this regard, the highest average time recorded by learners was about 52 minutes spent on NELGA Francophone courses, followed by 6 minutes 18 seconds on land-based finance, 4 minutes 31 seconds on GEC, about 2 mins 23 seconds on TR-LUP and 1 minutes 12 seconds on STDM.

Figure 4: Average time spent by learners and teachers alike on a particular course



Average time spent on the SKB teaching essentials was 19 seconds, and zero (0) time was spent on its French version. There is no indication that any teacher spent any time using any of these courses for training work. When viewed in relation to course enrolment, it is logical to assume that these low average times spent on courses explain why there is no course completion recorded on any of the courses yet. The paltry 19 second average time spent on SKB teaching essentials could be because either the course is not promoted adequately, or it is not interactive enough for users.

Other crucial statistics derived from the GLTN Dashboard include the device (Figure 5a) and browser (Figure 5b) statistics of users. These two statistics are useful because they show from what devices the learners use and the browsers they depend on for their e-learning sessions.

Figures 5a-b: Device and browser statistics

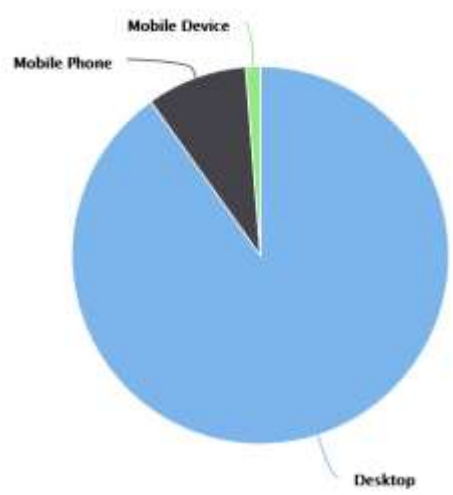


Figure 5a: Device statistics of users

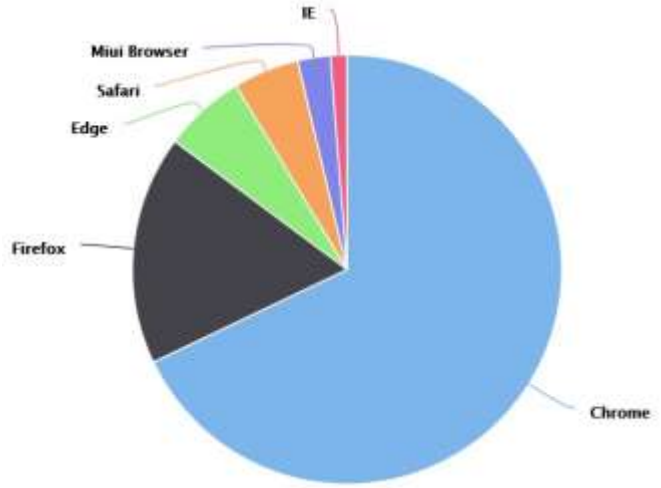


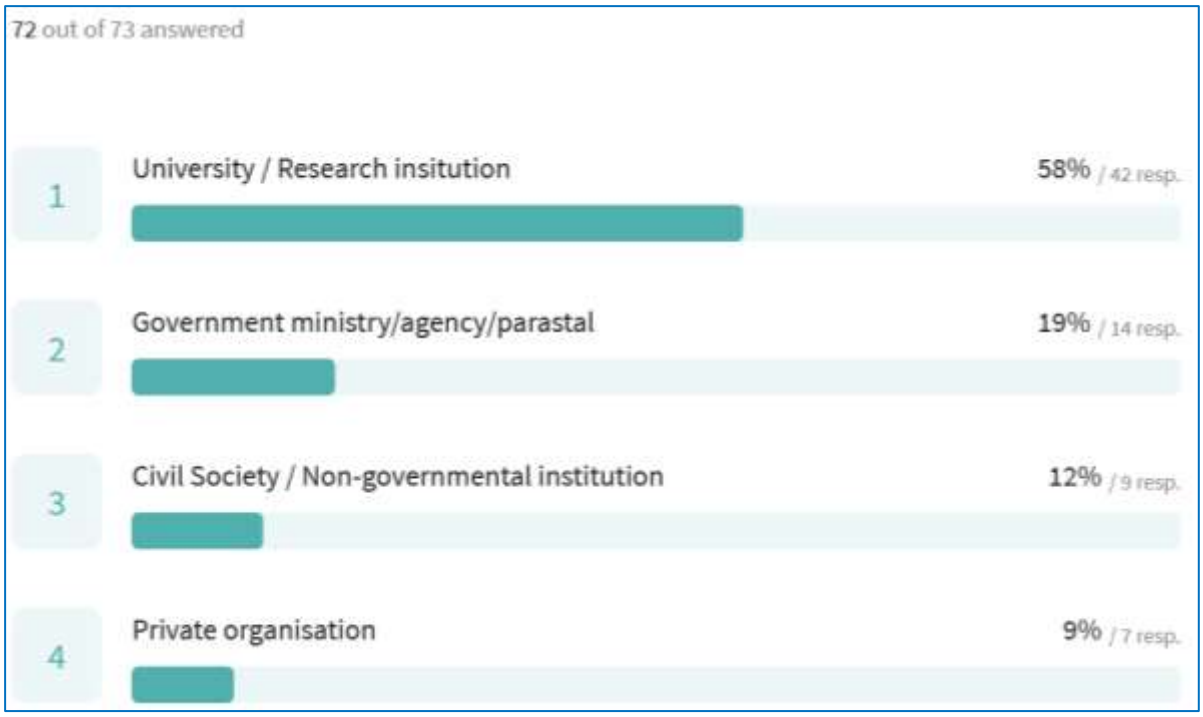
Figure 5b: Browser statistics of users

In terms of device use, most learners worked from a desktop (90%), followed using mobile phone (8.6%) and mobile devices (such as iPads and other forms of tablets, etc.) (1.2%). This data can be interpreted to mean that the e-learning materials is not yet widely accessible to people in remote areas in developing countries where regular desktop computers are still not in use. It requires that the GLTN's objective to extend the learning opportunities to rural areas needs a lot of work.

In terms of browser usage, the highest dependence is on Chrome (67.9%), followed by Firefox (17.3%); then Safari (4.9%), Edge (6.2%), MIUI (2.5%) and Internet Explorer (1.2%). These data may be useful for decisions related to the system maintenance of the e-learning platform. However, it is difficult to interpret what these data could mean for the SKB teaching essentials.

Critical Output Analysis from Typeform Gives Clearer Identity of Potential Users and Uses: A total of *73* respondents took part in the survey during a period of two months, from 23rd August to 24th October 2020. Regarding the questions concerning the type of organization, Figure 6 presents a descriptive outlook of the kind of institutions either using or are willing to engage in the use of the SKB.

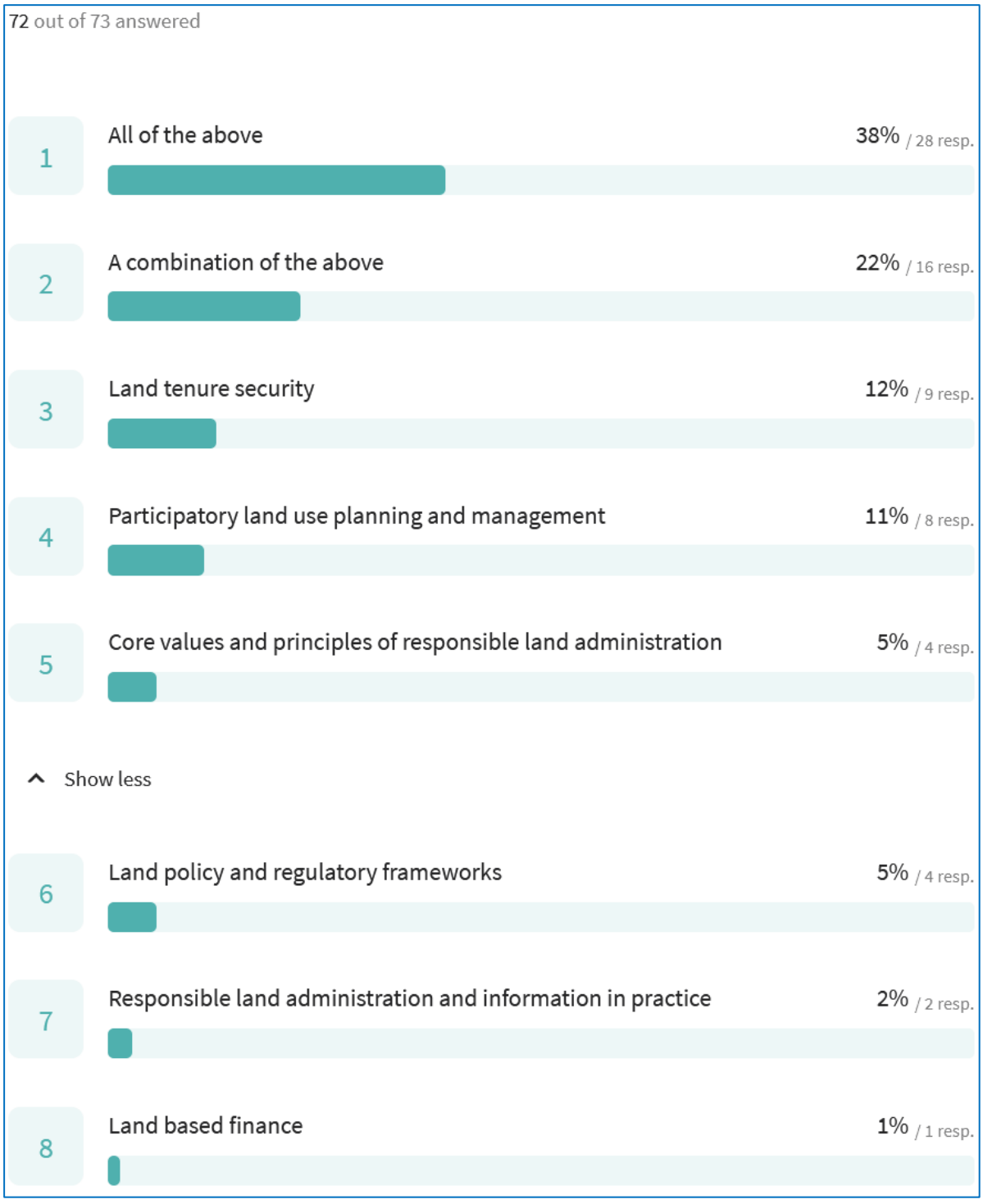
Figure 6: Type of organizations engaged in the use of the SKB



From Figure 6, majority of institutions with a vested interest in the use of SKB are universities/research institutions *(58%)* followed by government agencies *(19%),* then civil society organizations *(12%)* and private organizations *(9%).* Most individuals from the private organization category.

Figure 7 (below) presents a descriptive outlook of the specific content (or a combination of contents) that the respondents are willing to use.

Figure 7: Outlook of curricula (modules) interests from respondents



From Figure 7, it clear that *38%* or the respondents opted for adapting all the six modules of the SKB. *22%* opted for a combination. *12%* expressly have vested interest to adapt *land tenure security* module. *11%* specifically opted for the *participatory land use planning and management* module, *5%* opted for the *core values and principles of responsible land administration* and *land policy and regulatory frameworks* modules equally. *2%* and *1%* opted

for the *responsible land administration and information in practice* and *land based finance*, respectively.

With regards to the question about the institutions that indicated interest to adapt the SKB in their capacity development work or teaching curricula, the output is presented in Table 1:

Table 1: Potential Institutions interested in the use of the SKB teaching essentials for either teaching or capacity building/development work

Institutions and countries with interest in the use of SKB teaching essentials			
1. Kwame Nkrumah University of Science and Technology (Ghana) 2. Clark University (USA) 3. University Ibn Khaldoun of Tiaret (Algeria) 4. Lands Commission (Ghana), 5. National de la recherche Scientifique (France) 6. Land & Address company (country unknown) 7. Institut Teknologi Sumatera (Indonesia) 8. Uganda National Roads Authority 9. SD Dombo University of Business and Integrated Development Studies (Ghana) 10. Namibia University if Science and Technology (Namibia)	11. Land Management Bureau (USA) 12. Kadaster (the Netherlands) 13. FAO 14. Ardhi University 15. University of Zululand (South Africa) 16. Makerere University (Uganda) 17. Uturu Development Association (Nigeria) 18. Adonai Association (Nigeria) 19. Shelter Association Uganda) 20. Bahir Dar University (Ethiopia) 21. ITC / University of Twente (the Netherlands) 22. Technical University of Munich (Germany) 23. Federal ministry of interior (country unknown) 24. RICS	25. Enugu State University of Science & Technology (Nigeria) 26. University of Lagos (Nigeria) 27. River State University of Science and Technology (Nigeria) 28. Berlitz (Germany) 29. African Planning Institute (Urban Afrikanischer Traum - African-wide) 30. Public Affairs Research Institute 31. University of Rwanda 32. Ines-Ruhengeri (Rwanda) 33. CONICET- Univ. Nacional De Río Negro (Argentina) 34. UNEP 35. LANDnet (Europe) 36. Uganda, Ministry of Energy and Natural Resources 37. Malaysia, SDD-UBIDS	38. The Federal Polytechnic Ado-Ekiti (Nigeria) 39. Leibniz Universität (Germany) 40. City of Zagreb (Croatia) 41. University of Bern (Switzerland) 42. Macaw Properties (Ghana) 43. Institute for Land and Community Resilience of the Federal University of Technology Minna (Nigeria) 44. University of East London 45. Kyambogo University (Uganda) 46. Windfirerain (Nigeria) 47. Abia State University (Nigeria), 48. GTOPIC 49. Intergovernmental Authority on Development (IGAD) 50. Kenya Meteorological Department (Kenya)

The above-listed organizations have been sorted out after removal of various duplicates due to persons from the same institution responding to the *Typeform* surveys. While some of these institutions failed to identify their countries of origin, most of them are contactable through e-mail contacts[14] collected during the survey. Apart from the global or regional focused organisations that indicated interest in the use of the SKB teaching essentials, the potential country-focused organisations in the list originate from Argentina, Rwanda, Malaysia, USA, the Netherlands, Indonesia, United Kingdom, Namibia, Nigeria, Ghana, Germany, Croatia, Switzerland, France, Uganda, Ethiopia, South Africa, and Kenya.

6. EMERGING ISSUES AND THE STEPS GOING FORWARD

Contemporary studies in land administration require adaptations that support the solutions to global challenges in ways that are consistent with international goals and instruments (including the Sustainable Development Goals and the New Urban Agenda). It is in line with this goal that the GLTN engaged in developing the SKB teaching essentials to make learning materials available in various areas of land administration. By introducing the SKB teaching essentials, the GLTN has created a collection of dynamic learning instruments using captivating and straightforward visuals (combined with audio narrations in some courses) to improve users' learning experience. With a dedicated e-learning platform that is device friendly, the GLTN's attempt to provide access to land administration and land-related courses to people all over the world anytime and on any tablet or smartphone device, is laudable. However, education and capacity development are achieved not merely by access but use of learning materials.

The outcome of the *Typeform* survey represent responses received within a month interval. However, from the data collated as part of this survey, 73 individuals from 55 institutions and with 50 identified contacts could be used to engage in further opportunities to put the SKB to use. The *Typeform* survey is a work in progress. This means that more responses would be received over the coming months.

Steps Going Forward: In general, the current findings lack depth. However, it the *72 (out of 73)* responses provide a foundation for identifying and engaging with specific stakeholders for their substantive support in the intensive roll-out of the SKB teaching essential products. It also provides base data for strategizing target groups needed to ensure increased knowledge and utilization of the SKB. However, any success in achieving these objectives would depend on the steps going forward. In this regard, the GLTN still has a lot of work to do in marketing to potential users of the SKB teaching essentials to engage in the use of the modules. The recommended steps going forward should include:

- Contacting the stakeholders identified in this report (together with other GLTN partner organizations) to engage with them on how they can adapt the SKB (or aspects of it) in their capacity development work on responsible land administration and related courses.

[14] The email addresses are confidential and only meant for use by the GLTN in institutional follow-up messages if deemed necessary.

- Engage the stakeholders to understand what role or support the GLTN can play to ensure that they use the SKB teaching essentials in their capacity development or educational efforts.
- Devise a means for monitoring the engagement of these stakeholders in adapting the SKB teaching essentials.

7. CLOSING REMARKS

The development of the RLA teaching essentials (i.e., the SKB) is important development the capacity of students in land administration. However, it is important to acknowledge that this will only be possible if the teaching and learning of RLA us conducted ways that respond to societal needs. Drawing from a list of extensive works on land administration and related subjects (see Chigbu et al. 2017 & 2019), the strategy for teaching and quality of curricula are key to success. This requires setting land administration lessons and class activities in a meaningful context, and organising teaching/learning to ensure that their embedded assessments align with locally realistic (and still adapting the latest) instructional materials. The SKB teaching essentials serves the purpose of giving access to instructional and learning materials to land administration students all over the world, particularly for countries in the Global South. Ensuring that these teaching essentials are widely used remains a challenge.

It is expected that the potential use and potential users of the SKB teaching essentials will grow over time. However, added efforts would be necessary to ensure that academic networks (Kuusaana et al. (2021) in land administration and related subjects are involved in the promotion of the use of these materials. More direct effort is also needed for engaging stakeholders in the land education to ensure that the SKB teaching essentials serve its needed objective – as a structured knowledge base – for curricular development and curricula updates.

In this regard, some success has been achieved. These include the recent translation of the RLA SKB teaching essentials into the French language to ensure that people with interests in land administration from francophone countries around the world have access to the resources. The francophone version of these resources has already been completed and uploading on the GLTN e-learning platform for access to the global community. Further efforts towards promoting the teaching essentials includes a proposed virtual launch of the SKB teaching essentials' modules (both English and French), involving the various NELGA institutions in in Africa in collaboration with the GLTN and GIZ. It is hoped that these efforts would set a platform for the promotion of the SKB teaching essentials for improved use by the global stakeholders on land.

ACKNOWLEDGEMENTS AND CREDIT

This paper is written as part of the project of the GLTN's International Research and Training. The role of all the partners within the GLTN's International Research and Training Cluster is acknowledged. Of mention are those key partners who directly produced this GLTN Teaching Essentials project. Their role is acknowledged. These key partners include: RMIT University, University of East London, University of Florida, University of West Indies, University of Twente, Aalborg University, Ardhi University, Technical University of Munich, NELGA (Network of Excellence in Land Governance in Africa) and UN-Habitat. The contributions of the participants in the two-day Expert Group Meeting held in November 2016 at the University of East London (for helping to scope

and frame the content of all the modules) are acknowledged. The Namibia University of Science and Technology (NUST) has been at the forefront of promoting the SKB teaching essentials, through position as the NELGA node for Southern African region and its co-leadership of the Research and Training Cluster of the GLTN. The efforts of the GLTN's International Research and Training Institutions Cluster in collaboration with the Commission 2 of the International Federation of Surveyors (FIG) (in launching and promoting this teaching resource) is well acknowledged. Credit to the GLTN (a substantial content in the section 3 of this paper are texts culled from the GLTN e-learning platform).

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