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## Moodle Platform: A Case of Flexible Corporate Learning in the Financial Sector in Sierra Leone

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# **Moodle Platform: A Case of Flexible Corporate Learning in the Financial Sector in Sierra Leone**

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## **Abstract**

In the current age of technology, which is supported by flexible (hand-held) devices like iPad, the use of learning platforms such as Moodle can support virtual learning through synchronisation with available technologies like effective (fibre-optic) network system. In addition to it being a good platform for academic learning, its use is now becoming widespread in the corporate environment, more so for compliance training in areas like banking and insurance sectors. In developing countries like Sierra Leone where resources are limited, effective corporate governance can be addressed by ensuring that people are conversant with their organisational compliance policies through access to Moodle managed learning environment (MLE). There is a myth concerning Moodle's confined use in the academic environment, but this work will explore its relevance in an environment not so common in the working practices of staff professional engagement and learning in the corporate environment. Discussion is focused in the financial sector where demand on work is preventing employees and even those charged with governance from engaging themselves in activities supposedly meant to enhance their understanding of professional working practices, for example, addressing risks and compliance measures.

**Keywords:** Moodle, collaboration, e-learning, corporate environment, Sierra Leone

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## **1. Introduction**

In the current age of technology, which is supported by flexible (hand-held) devices like iPad, the use of managed learning environments (MLEs)/platforms of various sorts can support virtual learning through synchronisation with available technologies. The advent of modern technology has made it possible for new terminologies to be added in the discourse of professional undertakings. In these cases, the use of words like managed learning environment

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(MLE), virtual learning environment (VLE), technology-enhanced learning (TEL) and many more has become the terminologies of everyday language for people engaged in virtual space of work, be it for formal learning or other means of collaboration like video conferencing and blogging.

All around the world, e-learning is becoming widespread, and not only in the academia where its usage is the common ground for enhanced teaching and learning, but corporate organisations such as legal, medical and financial institutions are also embracing it as a way of improving knowledge of people in the dynamic world of technological advances [1, 2]. The pace of MLE is expediting the speedy globalisation of institutions through enhanced virtual collaboration features present. It is now possible for users to improve their learning opportunities without being physically present in a classroom situation. An approach used by most established organisations to gauge performance management of employees without having to watch them all throughout the time as all activities or tasks were performed on MLE platforms like Moodle can be tracked.

Developing countries like Sierra Leone are still treading in the direction of making advances in the global community of technology, but this needs serious strategic planning to make sure institutions of all types (corporate, educational, governmental and non-governmental) harness the chances of keeping pace with countries around the world. With the current high state of non-compliance present in the financial sector, it is but necessary for technological advances like MLEs to be given serious consideration in the breakthrough of ensuring that professional working standards are embraced. Currently, institutions across the world, particularly those in the advanced economies, are embracing the opportunities, given the benefit this sort of technology brings to improved operations and work standard, with the capacity to synchronise management information systems (MIS) where employee details are automatically updated on the system to take full advantage of facilities.

This advanced and digitised technology brings with it the advantage of synchronous or asynchronous means of learning/communication around the world; the former refers to the exchange of ideas and information with one or more participant at the same time; for example, this could involve face-to-face discussion and also online real-time discussion, incorporating feedback from participants. On the other hand, the latter (asynchronous) is a form of self-paced means of communication/learning where participants are engaged in ideas or discussions without the dependence on another participant in a real time (e.g., this may include blogging, emails and discussion board). Both synchronous and asynchronous methods are said to have moved society to a point where individuals can improve their opportunities for collaboration, with knowledge acquisition set at the centre of embracing a variety of learning opportunities the technology has brought to people's lives [3, 4].

The facility of Moodle platform is not so common in the learning environment in many developing economies and in particular Sierra Leone where learning process is still based on the old didactic approach to teaching. Given the current age of technology, it is now a choice for those engaged in learning to decide as to whether they should engage in 100% online learning or part way depending on their commitments to work. The decision to move into a flexible approach to learning by staff in a country like Sierra Leone will certainly change the

landscape of professionalism as staff are mostly engaged in the rote approach to learning and without many opportunities for them to be actively connected with virtual world of learning. The benefit of proposing Moodle as a means of learning for the financial sector is that its flexible feature makes it possible for anyone to be actively engaged in continuous learning, more without the need to worry about distance and location. The learning process is always done electronically with real-time engagement with other participants in the world.

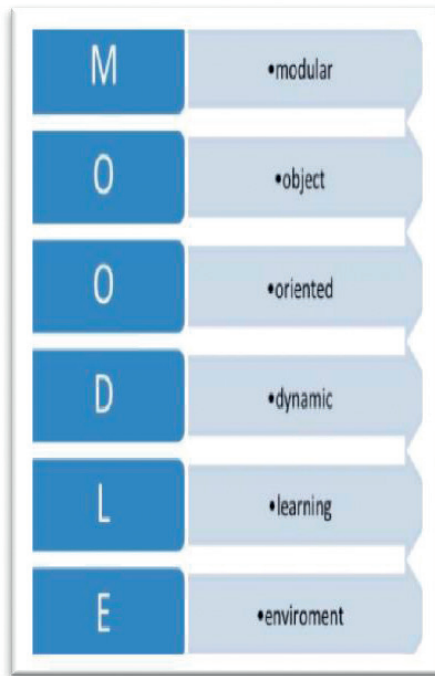
## 2. Moodle learning environment and its architecture

Moodle is a learning environment whose topology is defined by an easy access for users to select appropriate tool(s) that enhances their access to learning resources. Based on an excerpt from Jackson [5], the term *topology* from its derivative in mathematics and as applied in the context of this chapter refers to the physical description of Moodle features that makes learning for both teachers/instructors and learners more adaptive, with its flexibility of usage in a static/m-learning environment using gadgets like tablets/mobile phones. By definition, 'Moodle is a learning platform designed to provide educators, administrators and learners with a single robust, secure and integrated system to create personalised learning environment (Moodle: online)'. The complex feature of the platform has made it possible for users to take advantage of modern technology through flexible means of engagement, which can take the form of self-paced learning, video conferencing, real-time collaboration with users and many more. **Figure 1** provided an illustrative discourse of the architecture of Moodle with its integrated features for promoting flexible means of learning, while also ensuring details for the achievement of high professional standards are met.

According to Kesse [6] as shown in **Figure 1**, the concept 'Moodle was originally an acronym for Modular Object-Oriented Dynamic Learning Environment', with its main philosophy geared around supporting a style of learning called social constructionist pedagogy, which is simply about interaction. The system has developed a flexible approach to dynamic learning, and regardless of where the user is, learning can still be made as an integral part of the person's professional impetus to aim higher. With the right level of support and internet capability, access to Moodle platform creates a new wave of thought into people's approach to learning.

According to Kesse [6] and more so Moodle (online), the architecture supports collaborative virtual pedagogy with both learner and instructor at the centre of virtual/collaborative engagement. This is the most important feature of Moodle as it creates the means through which users can be actively engaged in their learning process and at a flexible pace.

The assignment tool button in **Figure 2** allows task(s) to be created which can be assessed with constructive feedback and graded by the instructor. Most importantly, there is also a feature for instructor and learner to engage in collaborative virtual 'feedback', thereby creating scope for flexible means of differentiated learning engagement. The benefit ascribed to the pedagogy tool is such that all users will have equal chances of being monitored due to the fact that the platform allows MIS data integration/synchronisation of user records. It matters not

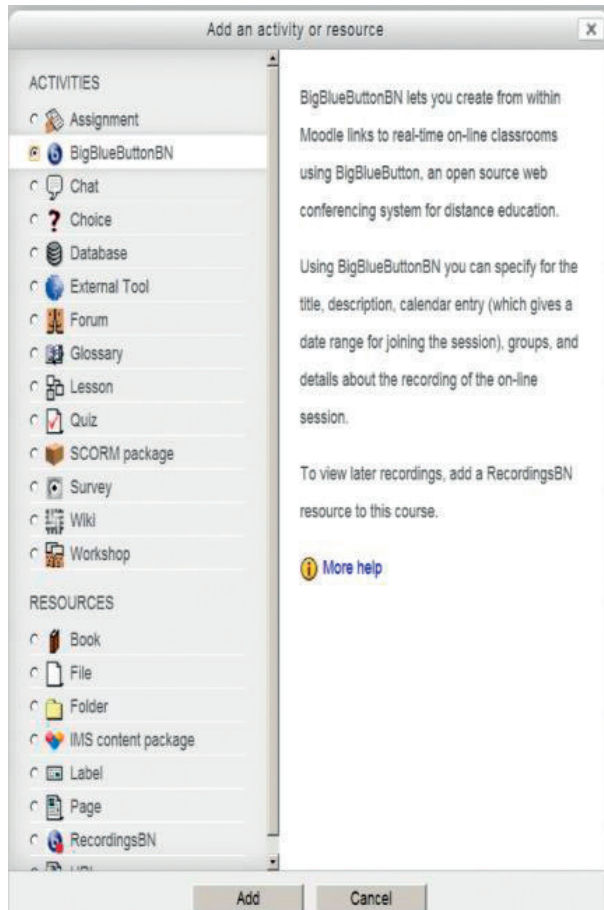


**Figure 1.** Moodle acronym.

as to whether the environment of work is in formal education or in the corporate world; there is always the capability for Moodle system to develop a comprehensive set of database for users accessing the system. Moodle is quite a dynamic platform, and its open-source feature gives it an advantage for principal users in institutions (whether in the corporate or academic environment) to customise tools to address organisational priorities. As seen in **Figure 2**, the *BigBlueButtonBN* allows access to real-time classroom and also later recording using the *RecordingsBN* resource button [7].

With reference to **Figure 2**, Moodle provides the means for an instructor to add the following five types of readable course (much more so in the lesson tool) materials for users, but not necessarily interactive [6, 8]:

- A text page
- A web page
- A link to anything on the web
- A label that displays any text or image
- A view of 1-year course directories



**Figure 2.** Moodle pedagogy (activities). Source: Fred Dixon [7].

On a more interactive note, the following interactive course materials can be added for learner's use as addressed by Kesse [6]:

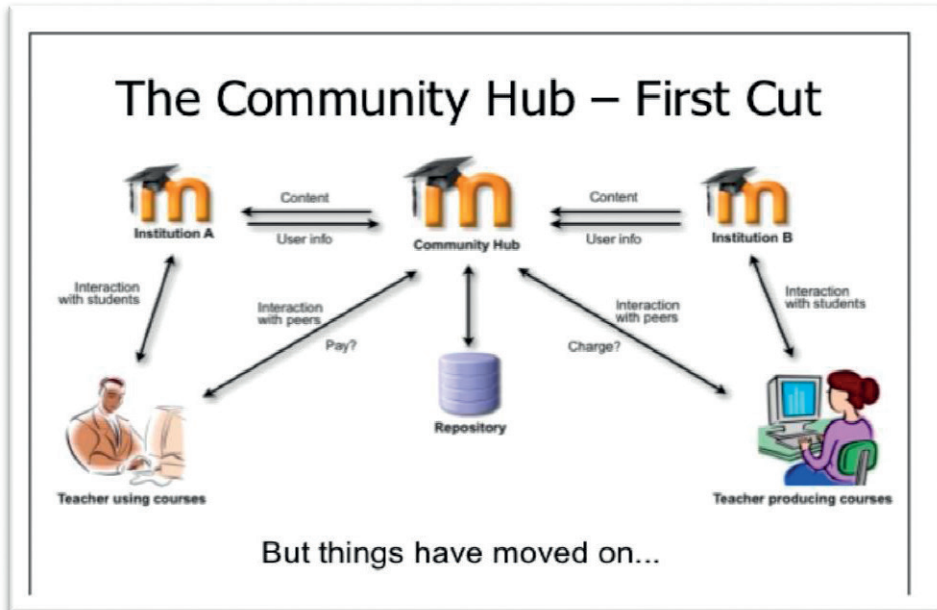
- Assignment (everyone can upload files to be reviewed by the instructor or learner)
- Choice
- Journal
- Lesson
- Quiz (online)

The following activity items on the pedagogy widow will also be an easy interaction and collaboration by the student:

- Forum
- Quiz
- Wiki
- Chat
- Glossary

Moodle runs through an operating system (depending on the most preferred choice of an institution/organisation), and its topology can be networked to address the needs/requirements of users or the establishment. **Figure 3** provides a generalised topology system for a typical Moodle infrastructure with connecting hubs, with not only physical cables within establishments, but also wireless cables, to address the institution's size directed at the Moodle server to make sure information are easily shared irrespective of where the user is accessing information.

The network architecture is arranged such that users can be engaged in multi-tasking activities at the same time. This can then provide users the chance(s) of making flexible use of the



**Figure 3.** Moodle general topology infrastructure. Source: Sean Keogh [9].

topology to collaborate with multiple users, for example, a facilitator setting up an online collaborative ‘forum’ in the pedagogy architecture to post materials for learners’ conversation or answering questions as and when requested by individual or user groups [10]. Enhancement of user security is key to the applicability of Moodle usage; in this regard, users are initially set up with individual account (username and password). This then means that users can access their account(s) from any location, with a given Internet-connected hardware device (desktop PC, laptop, iPad and other portable m-learning devices such as iPhone). Users can access all materials in the same way as if they were in a physical environment of learning.

Amidst the above benefits of using MLEs, there is always the need to raise caution regarding the fact that country like Sierra Leone (at the moment) may not necessarily be capacitated to run a consistent 100% online provision to support high-level operational activities. In this regard, organisations in the financial sector may need to ensure that high percentage of their proceeds in profits is invested in high-level technology to make sure staff are highly capacitated to keep pace with standards in the industry. Advanced collaboration feature in Moodle MLE can create the enabling environment where provision for such facilities is easily accessible by staff in the industry. The topology has made it possible for collaboration to be facilitated through chat rooms where learners can pose questions pertaining to their learning developments. Regardless of the number of branches or locations an institution is operating on, Moodle technology will always provide the opportunity for users to participate in a course and contribute towards the learning process through active participation on questions posed.

### 3. Link with G.J.J. Biesta’s pedagogical theory

According to Jackson [11], the architecture of Moodle has made it possible for learning to be characterised on the basis of what Biesta [12] classified in the pedagogy of three interconnected discourses of good education: *qualification, socialisation and subjectification*.



Figure 4. Biesta’s interconnected education. Source: Twenty-first-century learners [13].



Moodle as a learning tool provides the medium through which learners/users can improve their knowledge (qualification discourse) as a result of the active and collaborative support from facilitators in the learning environment. As shown in **Figure 4**, Moodle platform provides the enabling environment for users to collaborate, either through face-to-face or virtual means of socialisation discourse, an area also emphasised by Majumdar [14]. In the event that such learning platform is to be adapted, particularly by corporate establishments in the financial sector, there is an opportunity to increase users' opportunity in their improving skills through knowledge sharing. This can be done through the learning medium environment by engaging in activities like tests, which can be self-administered on a time scale as determined by the facilitator.

This is an opportunity for both facilitators and those charged with oversight/corporate responsibilities, for example, board of directors, to engage themselves in new technology, supposedly meant to improve their chances of acquainting with standards in addressing ongoing concerns like risks and compliance issues in the industry. Through Moodle platform, there is a high tendency for online collaboration to be fostered with colleagues in similar professions around the world. Given the nature of financial institutions like commercial banks and insurance companies, there is the tendency for branches to be located in every region and corner of the country. The use of Moodle as a learning platform will serve the purpose of ensuring that staff are regularly kept up to date about standards and performances in the industry. Courses can be easily accessed, and collaboration feature like chat and even real-time recording (reference to **Figure 2**) can provide the means through which staff enrolled on courses improve their learning skills and possibility of keeping up to date with standards through continuous engagement with the facilities provided. In as much as the Moodle is seen as a tool for supporting academic ventures, the features in it can be explored equally to increase organisational performance and standard, particularly in a situation where core skills are required to be addressed by everyone working in a given industry. The standard requirement for gauging performance in any industry is to make sure staff are able to keep up to date with the core skills, and in this case, competencies can be set up on Moodle for staff to be regularly engaged on while at the same time ensuring their collaboration feature used effectively to keep up to date with standards in the industry.

In application to Biesta's pedagogic theory of learning (reference to **Figure 4**), there is potential benefits that can be gained through engagement in formal qualifications pertaining to meeting industry standard requirements. Similarly, there is an opportunity of engaging in the best practice of ensuring continuous and flexible assessments that are set for staff while working at the same time. Biesta's third pedagogic theory is *subjectification*. This relate more to choice, which allows people to decide on which area of their work emphasis can be concentrated in a bid to either gain recognised qualification or credit in improving working practices and recognition in their professional engagement. Given the experience of the recent global crisis, the advent of technology like Moodle can serve the purpose of ensuring that staff competencies are enhanced through engagement on specialist virtual courses. Where the requirement is based on risk and compliance in industry like financial and insurance sector, employees can be actively engaged in studies, and continuous assessment exercises can be set up to make sure core skills are assessed regularly through the test activity platform.

This means that specialist skills can be addressed and with the necessary support provided to make sure staff are competent enough to meet the standard required in the industry.

One area of relevance in the practice of this interconnected learning pedagogy is the fact that learning process can be differentiated on the basis of pace to meet users'/learners' needs, more so in ensuring standards that are achieved through application in their work environment. Apart from being an essential technology for improved collaboration, it also comes with the benefit of flexibility to the learner, and also those that are engaged in the facilitation process can adapt resources flexibly to address specific learning needs, with easy accessibility regardless of location and the type of device the user may decide to use in accessing materials, for example, laptop, desktop or tablets. Through such dedicated approach to learning opportunities created, it is certain that staff will be able to produce tangible evidence in the form of *qualifications* as addressed in Biesta's interconnected learning pedagogy. The *socialisation* facility provided in Moodle platform makes users improve their learning opportunities on a regular basis without recourse to finding alternative means of support. Given the heavy demand on staff working in the finance/insurance industry, it can be very difficult for them to be actively engaged in learning that will improve their core competencies, but with the availability of flexible learning medium like Moodle, users can be assured of improving their skills regularly by ensuring the features are used effectively and on a regular basis.

#### **4. Corporate governance and risk compliance in Moodle technology (financial sector environment in Sierra Leone as a case study)**

In order to keep pace with the dynamic world of digital technology and also improve high standard in work practices, it is vital that senior leadership takes cognisance of how the best facilities in MLE technology can support high-level corporate governance issues, in a bid to ensuring risks and compliance responsibilities that are addressed on a regular basis. In developed economies like the UK, there are tremendous efforts being made to address concerns around risks and compliance, particularly so on the account of the better experience from the 2007/2009 financial meltdown which witnessed billions wiped out of share value. This also witnessed the collapse of financial institutions and simply on the account of relaxed measures in keeping pace with macro-prudential guidelines that were essential in combatting risks to the financial system.

In addition to mitigating issues around risks and compliance measures, financial and also insurance industries in the developing countries are actually making tremendous efforts to capacitate staff in meeting with the demands from customers through product introduction in the market. As emphasised by Majumdar [14], 'increasing competition, newer regulatory bodies and the tremendous impact of information technology have changed the way the industry conducts businesses'. In this vein, there is high priority given to adapting the topology of MLE to suit mobile devices, such that business operations can serve the needs of customers, more so in a flexible manner. This meant that such topology can be customised to incorporate the integration of video-/audio-based learning solutions that enhance employees' confidence in performing their roles. In addition, they can also be integrated with required facilities for frequent

update on mandatory skill requirements to ascertain minimum compliance standards in the industry. This, for example, could ensure regular assessment on core skills that are addressed through industry standard courses to improve confidence for those engaged in the industry.

The use of Moodle platform can also carry with it the benefit of serving as a medium for institutions, particularly those in the finance/industry to launch new products while at the same time serve its purpose within the human resource (HR) department of monitoring core assessment of skills/professional standards from employees and also a platform for making the best recruitment of experienced staff. It can be a very appropriate medium for the assessment of core skills needed by employers, which is needed in the current age of technology to reduce unnecessary costs incurred by employers. The collaborative feature makes it possible for easy means of initial assessment, while the end goal is to make sure potential staff are suitably assessed to meet the requirements of organisational objectives.

In this way forward, the use of MLE or appropriate learning platform environment like Moodle can support this through its dedicated use by institutions, particularly in developing countries like Sierra Leone, to increase staff skills and equally those charged with oversight responsibilities of governances. As presented in the above diagrams, particularly that of **Figure 1**, the availability of Moodle will allow scope for staff to increase their learning opportunities, more flexibly in their scope to improve performances. The preference for this is based on its ease of cost to the user and easy means of online learning support provided by the creator.

## 5. Conclusion

In the current age of technology, organisations must endeavour to make it part of their organisational and corporate objectives in ensuring that technology has made an integral part of enhancing human resource capacity. The discussion has provided some snapshot of Moodle platform in advancing human resource potential, particularly in coming to terms with compliance and risk issues corporate organisations face in the digital world of technology.

For those already working in the pathway of moving their organisations in the direction of embracing modern technology, efforts must be addressed, whereby research has made an integral part of the strategic leadership to ensure that the most cost-effective MLE is used to drive standards to their highest level, particularly in areas where risk is of critical concern to an organisation's potential for development and sustainable growth in a competitive market.

The use of Moodle as an 'open source' e-learning platform is more appropriate for a country like Sierra Leone where the cost of managing commercialised MLEs can be proven challenging; this has the opportunity of managing staff potential in areas concerned with standard of operations deemed relevant for organisational survival in a competitive market. By definition, open source refers to free access, and in this case, e-learning resources like Moodle can be easily accessed by users around the world without additional cost to the host institution and users. It has additional provisioning for users to seek virtual professional support/training from the parent Moodle institution, particularly in situations where new features are to be added.

Moodle is not only an academic medium for learning but also very relevant in the corporate environment as a way of improving collaboration in work standards, while also ensuring technology is reached out to every individual, regardless of place or distance. This technology will make it possible for people's progress to be monitored without the need to be constantly watching them. It brings an entire system under single operation while at the same time making sure collaboration amongst participants is of high concern. In this case, the effectiveness of such a system will need the support of both strategic leaders and those participating in courses to make sure value for money is set as the centrepiece of an institution's goal.

### **5.1. Outcome indicators of facilitation and learning impact**

Moodle as a type of flexible learning platform has provided the means through which learners/users can independently develop their (learning) skills to improve overall corporate responsibilities, particularly in an industry like financial/banking where the dynamism of things happening is very rapid. In this section, effort has been made to address the impact to users into two categories, namely, 'soft and hard' as summarised below:

#### *5.1.1. Soft indicator impacts*

These are more generic outcomes for the benefit of both learners and facilitators in enabling a more flexible approach to learning to be realised:

1. Improve collaboration between learners/users and facilitators which can be done through activity links provided, for example, 'forum or feedback' activity link sections where users, in this case, both facilitators and learners, can engage in virtual collaboration in improving knowledge. This form of collaboration can be moderated by the facilitator in a bid to avoiding indecent or more instructive discussions in the way of improving knowledge.
2. There is also a possibility of adding value to knowledge by developing bespoke CPD sessions, particularly for the benefit of facilitators who will need to be on top of how learning is steered on a regular basis. This is also a way of improving skills in interactive differentiation on how course items are to be delivered in meeting the needs of learners' learning styles.
3. This can also be an opportunity for targeting means of high quality of assessment and feedback provided throughout to learners. This in itself is a way of improving timely feedback to the learning community, particularly those who may be enrolled on specific summative assessment courses required for performance management.

#### *5.1.2. Hard indicator outcomes*

This is the strategic level of outcomes which needs the support of strategic leadership to improve learning outcomes of users:

1. Given the flexibility of the online learning platform, this is an opportunity for strategic leaders to support 'add-on' features like link buttons for learners to quickly access constructive feedback and support guides to improve learning outcomes by users. In this case, progress of those

engaged in the process of using Moodle to improving their outcomes will be monitored, more so as a way of determining performance management like pay progression and promotion.

2. As a way of going forward, the HR department in individual institutions must endeavour to create Information and Learning Technology (ILT) position(s) to make sure specific duties and responsibilities connected with flexible learning using the platform are managed. This may include additional role of ensuring course materials for users' needs that are uploaded regularly, with improved interactivity.

3. A dedicated time is also essential for strategic leaders to consider as a way of ensuring users/learners that are conversant with the topology of the learning platform. This will serve as a way of marketing the corporate social responsibility role of management in improving capacity building for staff.

## Acknowledgements

At this juncture, I want to take this opportunity of expressing my appreciation to my children (*Sona, Hannah and Emerson [Jnr]*) who have been very receptive to my emotions, particularly time spent away from them to make ends meet. They have helped in enthusing my epistemological journey towards this book chapter. I am also grateful to my brothers (in Sierra Leone and the UK); colleagues in the Research Department, Bank of Sierra Leone; and the academia who have been instrumental in making my mind very focused in thinking constructively throughout the journey of this project.

## Author's Biography

Emerson Abraham Jackson is also a Doctoral Research Scholar [distance learning] at the University of Birmingham, researching on *Sustainable Livelihood and Development* in the Goderich Community. He has over two decades of experience in research and teaching both in Sierra Leone and the UK, with evidence of scholarly publication in reputable international journals like the Journal of Mixed Methods Research, Education and Information Technologies Journal, etc. In addition to his academic pursuance, Emerson is a Senior Research Economist, heading the Model Building and Analysis Section, Research Department at the Bank of Sierra Leone, and also, with strategic *oversight* responsibility to the Sierra Leone Commercial Bank.

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