

Insight into the postgraduate certificate in teaching and learning in higher education, challenges, and opportunities

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Article Info	Abstract
<p>Research Article</p> <p>Received: 8 April 2024 Revised: 30 June 2024 Accepted: 29 September 2024</p> <p>Keywords: Higher education, Participants, Postgraduate program, Teaching and learning, Academic staff</p>	<p>The main objective of this paper is to evaluate the postgraduate program in learning and teaching in higher education. The program was designed to introduce the essential knowledge, skills, and abilities to enhance the teaching quality to the higher education academic staff. The research methodology was qualitative, with content analysis, structured observation, and storytelling techniques. The research findings reveal that the program has been designed for the junior staff to engage with the undergraduate students. The program does not consider the senior staff who supervises master's and PhD students, and they need knowledge about research methodology, thesis and dissertation supervision, and the support system. In conclusion, the program needs to be flexible with more optional or elective courses to specialize or personalize the content and structure for the individual participants.</p>

1. Introduction

There are several courses and programs to enhance the quality of teaching skills for teachers, tutors, and lecturers in higher education due to time and location. Seemingly, the policy of educational centers leads the instructors as learners to take these courses to enhance the quality of teaching. This policy varies from optional and supplementary to essential and compulsory in different institutes. Although many institutes offer such kinds of courses openly for learners, the University of Rwanda presents this program with the title of the Postgraduate Certificate in Learning and Teaching in Higher Education (PGCLTHE) (UR, 2019). The structure was designed on theoretical and practical activities to develop participants' knowledge, skills, and abilities, specifically in teaching, learning, and assessment in higher education, which takes time between half and one year of study.

Graham (2009) classified the education process into four components: activities, courses, programs, and institutions. Seemingly, the education of educators includes a parallel ordering in terms of interactions and results of students, staff, programs, and institutions based on the relationships. First, there is no doubt that the students are the primary purpose of higher education, and the participation of the students is the main reason for education. Second, staff facilitates the process of the delivery of knowledge through interaction, communication, and collaboration with the learners. Third, a curriculum draws the essential aspects of education that unify educators and educators on the same topic. Fourth, the institution's structure, vision, objective, and strategies play a significant role in the context of education, and the institute's system influences the quality of education. In this logic, postgraduate certificate programs (PGCs) are supposed to introduce the participants to the significant aspects of teaching and learning. Perhaps, for this reason, critiques highlighted the educators' low knowledge of the context of education and the teaching delivered based on self-learning and experience (Lee, 2005).

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There still needs to be a more significant gap in teaching teachers how to teach in higher education (Korthagen, 2016). The problem has been rooted in the need for a strong research background in educating teachers (Murray & Male, 2005; Murray et al., 2008). The studies revealed that the earlier activities in teaching new teachers took place in the apprenticeship model in the early nineteenth-century (Dennen, 2004; Labaree, 2008), and the concept of training the teachers in an academic environment is a new approach (Davey, 2013). Struyven and De Meyst (2010) advocated that educating teachers is a progressive process of knowledge, skills, attitudes, and experiences.

The University of Rwanda ranks first in the country and leads in higher education. To promote the university's quality of teaching and learning, the university's policy encourages academic staff to enroll in the postgraduate program. The program occurs in the Department of Education at the University of Rwanda. Due to the distance between the College of Education and the capital city, the course takes place on one of the campuses in Kigali, the country's capital. The program enrolls participants from different fields and backgrounds interested in teaching and learning in higher education. The number of students varies due to the registration process, which includes submitting essential documents, making payments, and attending class. The program consists of three modules without elective or optional components, and participants cannot specialize or personalize the program's content, exercise, and learning process.

This research is targeted to discover opportunities and challenges that the program is faced in the current structure. The research questions are designed based on whether the structure of the program covers the topics in higher education and what methods are applied in the delivery of the courses. Moreover, who is this program's leading target group of delivery services? What were the classes and activities in the program needed to be included? To discover the answer to the questions, this research will review the program's structure compared with other institutes, the process of delivery of the courses, and the program's content to expose possible steps to improve the program's quality in a practical method.

2. Studies on teaching and learning in higher education

There is a wide range of discussion about teacher and teacher education in both schools and higher education (Craig, 2016) to shift from a linear education structure to a dynamic and meaningful structure based on knowledge, skills, and abilities (Loughran & Hamilton, 2016). In the linear structure of education, teachers teach as their teachers have traditionally taught them rather than systematically (Drexler, *The architecture of the Ecole des Beaux Art*, 1975; Dutton, 1991) "We teach as we have been taught" (Tafahomi, 2022). The study highlighted that the linear structure not only encompasses the traditional values of a given society (Williams & Robert, 1997) but also includes some of the colonial approaches, in which the new approach advocated a revolutionary approach to training the trainers (Gatlin, 2009). In addition, the study recommended a shifting paradigm from the traditional style to a new model of education based on integrating three factors notably: knowledge, experience, skills, and abilities (Jones et al., 2002).

Korthagen (2016) questioned whether teaching the teachers requires a specific curriculum. He referred to the previous studies on the differentiation between the teaching students and the teaching educators in terms of the prior layer of education (Murray & Male, 2005; Harrison & McKeon, 2008). In this regard, some studies revealed that the education of learners for teaching is quite a new innovative concept in education that needs to be placed more seriously in the research activities for the education of teachers (Clarke & Hollingsworth, 2002; Loughran J. J., 2010). Nonetheless, in the traditional style, learners learn to teach through how they have been trained, or they have observed the teaching process by senior teachers based on apprenticeship trends (Dennen, 2004; Labaree, 2008). Perhaps, for this reason, the positions of assistantship and apprenticeship took place in this context to work under the supervision of a master to learn how to do the task as he did. However, the achievements of enlightenment activities in the 19th century resulted in criticism of the educational process for drawing a new approach in the 20th century based on pragmatism (Davey, 2013).

The modern movement in education introduced many new approaches such as research-based (Groat & Wang, 2002; Marshall & Rossman, 2006; Neuman, *Social research methods: Qualitative and quantitative approaches*, 2006), problem-based (Hmelo-Silver, 2004; Seifert & Sutton, *Educational psychology*, 2009), evidence-based (Moran & Malott, 2004; Vreman-de Olde et al., 2013), project-based (Blumenfeld et al., 1991; Helle et al., 2006; Kokotsaki et al., 2016), student-center (Hong, 2007), distance learning, and blended learning (Graham, 2009; Owston et al., 2013) to change educational environment significantly. This bulk of approaches changed higher education from lecturing in the classrooms to research activities (Johnson & Christensen, 2014), methodological approach (Silverman, 2010), problem-based learning, and competencies (Serdenciuc, 2013) that advocated the necessity of research activities in the higher education (Healey, Jenkins, & Lea, 2014).

In addition, the new achievement of education formulated not only the learning process but also how to learn based on epistemological skills, engaging learners in learning processes grounded on cognitive, non-cognitive, and specifically metacognitive skills (Hill & Houghton, 2001; Lee, 2005; Lubicz-Nawrocka & Bovill, 2021). It was expected that cognitive skills such as critical thinking, analysis, problem-solving, and creativity (Owens, 2007), and non-cognitive criteria such as personality, attitude, and motivation (Woolfolk, 2016), and metacognitive skills such as self-planning, monitoring, and evaluation (Salkind, *Encyclopaedia of educational psychology*, 2008; Tafahomi, 2022). These three skills refer to accountability and responsibility (Bold & Hutton, 2007; Marzano and Kendall, 2008) in the training process. It is supposed that the new movement in higher education approaches has resulted in the development of training courses for instructors in higher education. A comparative study of the different structures of PGCs in other countries can draw a general perception of the teaching of teachers' programs.

2.1. Comparison of applied structure for PGCs in other centers

There are a variety of postgraduate programs that teach higher education teachers. For example, Curtin University advocates the program as a new way to understand pedagogy through learning space, environment, and evaluation with an evidence-based learning approach. The duration of the program has mentioned half-year studies on campus with online options. The program is embedded in four modules, including the learning cycle: design and curriculum, design thinking and educational innovation, research for the scholarship of learning and teaching, and teaching portfolio (Curtin University, 2021). Temple University, for example, arranges this program to improve teaching through effectiveness, develop high-quality teaching, and build up portfolios and networks with professionals. The program includes two modules in two semesters, including teaching in higher education seminars and innovation, technology, and teaching in higher education (Temple University, 2021).

In some universities, the course includes elective modules for participants to specialize the content to their needs. For example, East Tennessee State University arranges the program into required elective and advisory modules. The required courses encompass two courses, "high-impact higher education instructions and the adult learner." The optional courses include three options: higher education in America, community colleges in the United States, and history of higher education in America. The advisory programs are selected by the course advisor for the participants. The university highlights the candidate's work experience, position, and writing ability as crucial as the critical criteria for registration (ETSU, 2021).

Moreover, The Swinburne University of Technology presents almost the same structure to 'transform teaching approaches, practice, and innovation through the use of technology and design.' The course is designed for one year in two semesters with two clusters of modules, core and elective. The core modules include 'nature of learning- teaching, curriculum design, and assessment presented' and elective courses contain digital learning environments, developing inclusive learning and teaching practice, scholarly teaching: to explore, evaluate and improve, design and delivery for online learning (Swinburne, 2021).

Harvard University presents the course online in eight weeks through the Derek Bok Center for Teaching and Learning. The aim and objective of the course are mentioned in terms of ensuring 'better teaching practice with alignment to the discipline, personality, and context.' The program is divided into eight weeks, and the titles of the sessional activities encompass 'the construction and communication of knowledge, how learning works, creating an inclusive learning environment, lesson planning, and delivery, engaging students, course and assignment design, using feedback to improve teaching and teaching portfolio preparation' (Derek Bok Center, 2021). In addition, the University of London presents this course online. The aim and objectives of the course are listed, such as 'confidence in teaching, enhance the skills, student's relationships management, balance in the study, work and commitment.' The course is presented in two modules "supporting learning, teaching and assessment, and enhancing learning, teaching, and assessment" (London, 2021).

The University of Cape Town also presents the topic in the one-year (two semesters) program with the aim of 'professionalizing of teaching and learning practice in higher education,' with the core and elective courses in the region. The program is based on 'learning and teaching in higher education, higher education assessment and evaluation practice, higher education curriculum and course design as core modules, and some elective modules such as 'South African education in context, online learning design, researching practice in education' (UCT, 2021). The University of Johannesburg points out that the objective of the course is to link the 'theory and practice, research-oriented activities, and enhances the knowledge about the education.' The program encompasses a variety of courses in both core and optional modes, such as 'teaching and learning, curriculum development, assessment,

research methodology, postgraduate supervision, learning with technology, leadership, and management, and understanding social inclusion' in higher education that the first four modules are arranged as compulsory and other optional modules respectively (Johannesburg, 2021).

Table 1 is conceptualized to draw similarities of the modules in some universities in PGCs programs such as the University of Nottingham (2021), the University College Cork (Cork, 2021), the University of the Witwatersrand (Witwatersrand, 2021), Walden University (Walden, 2021), University of Pretoria (Pretoria, 2021), Otago University (Otago, 2021), University of Sussex (Sussex, 2021), University of Kent (Kent, 2021), and the University of Rwanda.

Table 1. The content of the program in other universities

Center	Teaching learning	Assessment of course	Curriculum design	Research methods	Education innovation	Students diversity	Online learning	Context of teaching	Teaching portfolio
Curtin	√		√	√	√				√
Temple	√				√				
Otago	√		√	√			√		
ETSU			√			√		√	
Swinburne	√		√	√	√		√		
Derek Bok	√	√			√	√			√
Walden	√				√	√	√		
London	√	√	√						
Nottingham	√		√				√		
UCC	√	√				√	√		
Sussex	√	√							
Kent	√	√	√	√					
Witwatersrand	√	√	√		√				
Pretoria	√	√	√			√		√	
Johannesburg	√	√	√	√		√	√	√	
Cape Town	√	√	√				√	√	
Rwanda	√	√	√				√		

In summary, Table 1 reveals that some courses repeated more in the programs, such as teaching and learning, online learning, and curriculum, as the most common courses in the PGCs. In contrast, other courses, such as assessments, students' diversity, and innovation aspects, take place in the second priority level. Contextuality is a crucial criterion, particularly in Africa, perhaps in reaction to the postcolonial reconstruction. Some programs also offer elective courses in terms of specialization and personalization in the content. Two universities emphasize the adult teaching specification in the curriculum, and just one of the universities highlights the importance of supervision activities in the program. Although this table represents a quantitative aspect of the modules, a qualitative analysis of the current course of PGC at the University of Rwanda could lead interested people to criticize the opportunities and challenges of this kind of program.

3. Methods and Materials

This study has complied with the Research Publication Ethics stated in "Wager E & Kleinert S (2011) Responsible research publication: international standards for authors. A position statement developed at the 2nd World Conference on Research Integrity, Singapore, July 22-24, 2010. Chapter 50 in Mayer T & Steneck N (eds) Promoting Research Integrity in a Global Environment. Imperial College Press / World Scientific Publishing, Singapore". Since this is a Review Study, Ethics Committee Approval is not required. All responsibility belongs to the author.

The methods and materials included methodology, research design, research process, data specification, limitation and implication, and time and location as below:

3.1. Methodology

Studies on education and teacher's education applied quantitative and qualitative methods (Cohen et al., 2007). Quantitative methods and statistical analyses were used to evaluate educational big data and course outputs (Peers, 1996). The central part of the quantitative methods extracted data to analyze the results of the questionnaires precisely the opinions of the teachers and students (Tafahomi, 2021a; Xi et al., 2017; Yang et al., 2013). The

primary purpose of the quantitative methods was to discover the opinions of the participants in the research (Neuman, *Social research methods: Qualitative and quantitative approaches*, 2006; Loughran J. J., 2010) based on a survey operation, particularly the questionnaire (Creswell, *Educational research planning, conducting, and evaluating quantitative and qualitative research*, 2012; Almquist, Ashir, & Brännström, 2014; Johnson & Christensen, 2014).

The qualitative methods were also used to study the behavioral patterns of the teachers and learners based on the structured observation and interpretation of the results (Tafahomi, 2020; Tafahomi, 2021b). In detail, the study applied content analysis to analyze the documents, policies, curriculum, syllabuses, and educational materials (Krippendorff, 2003; Mugerauer, *Interpreting environments: Tradition, deconstruction, hermeneutics*, 1995; Murray, Nuttall, & Mitchell, 2008; Tafahomi, 2022). The studies applied qualitative methods to study the data in the context and the natural setting (Groat & Wang, 2002; Neuman, *Social research methods: Qualitative and quantitative approaches*, 2006; Silverman, 2004) exceptionally structured observation (Tafahomi & Nadi, 2020; Tafahomi, 2021c), and storytelling to explain the events through the narrative approach (Denzin & Lincoln, 2018; Given, 2008; Tafahomi & Chance, 2023) based on real events (Koskinen et al., 2011). Storytelling was mentioned as a qualitative method to interpret the events based on the observation of the activities based on the thematic topics, behavioral activities, and contextual matters in the research process (Denzin & Lincoln, 2018; Tafahomi & Chance, 2023).

3.2. Research design

This research was designed based on three qualitative techniques, including content analysis (Drisko & Maschi, 2016; Elo et al., 2014; Mayring, 2000), structured observation (Salkind, *Encyclopaedia of educational psychology*, 2008; Santrock, 2011), and storytelling of the events (Denzin & Lincoln, 2018; Tafahomi & Chance, 2023). The content analysis (Krippendorff, 2003; Mugerauer, *Interpreting environments: Tradition, deconstruction, hermeneutics*, 1995) was applied to evaluate critical criteria in the PGC program. The key factors were extracted from the program's structure and the modules' content with the application of the interpretation approach (Murray et al., 2008; Murray & Male, 2005). Through analysis of the program's content, the critical criteria were listed, including the program's content, methods of teaching in the courses, and the styles of the assessments. The structured observation (Marshall & Rossman, 2006; Tafahomi & Nadi, 2020; Tafahomi, 2020; Tafahomi, 2021c) was applied to analyze and interpret the styles and methods of the teaching and delivery of educational materials in the courses. To analyze the program's assessment style, content analysis, and structured observation techniques were applied to evaluate the assessment process and describe the results. A descriptive action was mentioned with the titles of storytelling method (LeCompte et al., 2012; Denzin & Lincoln, 2018) and logical arguments (Groat & Wang, 2002) to narrativize the observations, perceptions, or events.

3.3. Research process

To evaluate the PGC, the program's content was analyzed based on three critical criteria: the content of the modules, methods of teaching, and style of assessment of the learners. The content of the program was not accessible due to neither being shared content by the lecturers officially nor available on the department's website; therefore, the content of the modules was evaluated based on the presentations by lecturers through PowerPoint slides in terms of educational materials in classes. The critical criteria of teaching and learning aspects were analyzed based on educational material to determine each module's objectives and learning outcomes. Second, the teaching and course delivery methods were recorded through structured observation and notetaking as sessional activities to classify and interpret the module's aim. All activities were observed and recorded to discover the teaching methods, such as group work, individual activities, discussion, tasks, exercises, and presentations. Third, to evaluate the style of the assessments, all assignments were recorded based on the structure, time, handout, evaluation criteria, and achieved marks to assess the objectives of the assessments.

3.4. Data specification

The data included qualitative data, including three primary sources: the content of the presentation, the method of the presentation, and the assessment methods. The researcher collected data through notetaking in activities, interactions, and communications of six lecturers who presented the modules.

3.5. Limitation and implication

This research was carried out based on the researcher's structured observation in all program sessions without being absent. All data and interpretation were designed based on the researcher's note-taking in the classes, exercises, and activities in the program. Therefore, this research did not survey to collect the participants' opinions on the program. Perhaps the participants' views could highlight other aspects of the analysis that this research missed. In addition, the researcher did not inform the lecturer and students of the structured observation techniques at the time of the classes. Considering the possible effects of knowing the ongoing research about course delivery may affect the behavioral patterns of lecturers and learners that were not mentioned at the time of research.

3.6. Time and location

The program was arranged for the 2019-2020 academic year in the first semester. However, the COVID-19 and post-COVID problems affected the classes with many interruptions. Although most of the classes passed before lockdowns, the classes did not continue in the blended learning mode and, with some consideration, continued with social distance in the computer lab to cover the program's content. The classroom was located on the third floor of the teaching building and the first floor of the computer lab on the Remera campus in Kigali, Rwanda. The classes were arranged on weekends, including Friday and Saturday mornings and afternoons. The number of participants in the classes was 24 due to the final list of students, including learners from different departments such as medicine, law, public health, mathematics, education, and architecture.

4. Results

The program's structure encompassed three modules: 1) learning, teaching, and assessment in theory and practice, 2) curriculum design and development, and 3) e-learning: resource development and student support. Two instructors taught each module and divided the semester into two parts to present their topics, materials, and approaches. The instructors asked the participants for a teamwork project as the formative assessment and final critical papers regarding the summative assessment. The combination of the students encompassed the students from different departments and cities in the country.

4.1. Content of the program

The program's content, structure, and module description were not shared with the participants. Therefore, the students were introduced to the modules through the lecturers' slides. Thus, systematically comparing the delivered modules and the curriculum content was impossible. Nonetheless, the presentations of the lecturers provided sufficient data to analyze the content of the program in the three modules as below:

4.1.1. Learning, teaching, and assessment in theory and practice

The module's content was designed to cover teaching processes, methods, and materials in different programs based on a wide range of participants. The instructors highlighted the specification of educational materials in higher education, specifically in Rwanda. The main objective of this module was to obtain a framework for challenges and problems with higher education in the country. The module encouraged the students to brainstorm the challenges in some topics, such as infrastructure, language, class and campus capacity, and differentiation between K12 and higher education.

4.1.2. Curriculum design and development

The module presented a brief curriculum classification, such as intended, enacted, hidden, and invisible, although the course focused on its structure. The instructors attempted to present a framework for learners based on objectives, content, learning outcomes, and assessment methods. The instructors also briefly explained the curriculum assessment, review, and revision to introduce the learners to the curriculum development process and procedure.

4.1.3. E-learning resource development and student support

This module was designed to lead the participants in applying internet-based and distance learning activities. The course was in two parts, including applying digital tools and platforms to share information online and offline. Both lecturers asked participants to report their activities as educators. The first part focused on using the software in the classroom, and the second focused on hardware and networks. The course did not include Moodle applications for distance learning.

4.2. Methods of teaching

Most of the course occurred in a typical classroom with potable chair tables. The class was arranged based on row-column seating arrangement, and the lecturers took the position in the front of the school for the presentation. The computer lab was used for the eLearning classes. The lecturers applied PowerPoint presentations, common discussions, and panel works of the learners on different topics in terms of educational methods. Just two of the lecturers shared journal papers or offline eLearning materials. One of the lecturers shared the link to another institute for the eLearning materials that the participants can use.

The discussion in the class was the standard technique due to the high number of senior learners (senior lecturers who participated in the program) in the training course. The discussions were started through theories, ideas, or questions from lecturers and the participants based on concrete examples or hypothetical situations. The senior participants led the discussions who had more experience in different fields, classes, and industries. In this process, the class was a location to interchange the ideas, experiences, and lessons learned by the members at all levels. Although the junior participants (the assistant lecturers and tutors) were more passive in hearing the stories of active participants, the discussions shared information between them through listening. The debate was not recorded, shared, or presented as educational materials but as a complimentary conversation to be used by the classmates.

Brainstorming was another common technique based on teamwork activities applied by the lecturers concerning some course topics. The lecturers were asked to make temporary groups for brainstorming and present a board of ideas for the presentation, discussion, and critiques. The results of the activities were usually constructed based on a perceptual framework by the learners rather than a structured study, analysis, and conclusion. However, the discussion on the topics led the ideas toward improvement, precision, and completeness.

One of the lecturers applied SWOT (strengths, weaknesses, opportunities, and threats) and PEST (political, economic, social, and technical) techniques to analyze the challenges in higher education in the country in one of the courses. Despite each group of participants developing just one of the components in each technique, such as weaknesses or social aspects, the results of the exercises led other learners to understand different components of the methods based on the presentation and discussion. Both techniques were designed based on brainstorming, teamwork, and presentation processes. In each session, the participants presented one of the components of the methods in the classroom for discussion.

4.3. Structure of assessment in the courses

The program was designed in two formats: first, class activities in the group format, and second, the final project, which was called the final critical paper. Although the central part of the program included topics to explain formative and summative assessments, the program was arranged on the summative evaluation to evaluate the participants' progress. The activities were less based on a systematic assessment, marking, and informing the participants about the marks achievements and improvement in the formative evaluation. In addition, in the whole program, just one of the lecturers shared a handout with a clear structure of the criteria for evaluating the deliverables and marking just for the final exam.

The summative assessment was designed based on a critical paper on the participants' classroom activities, including the curriculum development, teaching method, applied strategies, and online and eLearning activities. Although the formative assessments were arranged in groups, the lecturers asked the participants for individual exercises for summative assessments in specific cases due to the participants' educational backgrounds. Table 2 summarizes the activities, themes, and topics in the program.

Table 2. The comparative table of the content of the course

Topics	Teaching learning	Assessment of course	Curriculum design	Research methods	Education innovation	Students diversity	Online learning	Context of teaching	Teaching portfolio
Content of curriculum and modules	√	√	√					√	
Methods of teaching in classes	√			√	√		√	√	

Structure of Assessment in the course	√	√	√	√	√
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4.4. Analysis of the results

The program's curriculum includes three modules: learning, teaching, and assessment in theory and practice, curriculum design and development, and e-learning: resource development and student support. This program structure does not provide a variety for the participants to personalize and specialize the program for their knowledge, skills, and abilities. Although the program aims to serve the most common needs of the participants as learners, the program's structure has been fitted to the junior participants to introduce them to the fundamental and essential components of higher education. For this reason, the curriculum structure encompasses fixed modules rather than elective or optional. The absence of elective courses in the program reveals that the program did not predicate a variety of learners in the program and is less adapted to the university's vast number of departments, schools, and colleges.

The lecturers shared the application of teaching methods based on their own experiences rather than a systematic process and procedure to reveal the essential teaching techniques for the participants. The absence of the research methodology module was prominent in leading the participants to design their educational methods to cover the epistemological aspects of the teaching, such as problem-based, project-based, evidence-based, and other approaches. Adding the research methodology module to the course could cover part of the gap in delivering educational methods and techniques. Notably, the research activities are essential for the participants in the program to apply the different approaches and methods in their program in terms of the personalization and specialization of the lessons learned in the specific field.

The program needs to be more prosperous in the assessment structure. The materials for the assessments, such as formative and summative, did not include a variety of quizzes, exercises, and projects to internalize the evaluation process for the learners in the course. In addition, the program is missing a solid background in writing handouts for different modules to teach the participants to draft the handouts for the exams by rewriting the achievements in the program. Due to this weakness, the program faced problems with the formative assessment of the participants. The participants needed to be more informed about their progress issues, the recommendations for improvement, and the steps forward to enhance their advancement.

The program includes no module or course about the students, academicians, and administrative staff. The program needs an educational psychology course and topic to help the participants learn about students' behaviors, the department staff's interaction, and communication with administrative staff on the campus. It is supposed that after passing the program, the participants know how to lead the students in learning and their reactions, interact with the academic staff in the educational context, and communicate with other colleagues. However, those aspects still need to be included in the program.

5. Discussion

The PGCLTHE program was a new movement in universities to change the traditional structure of education and training of the lecturers with a modern concept of education (Craig, 2016) based on a systematic structure of education grounded on the knowledge, skill, and ability similar to findings of Loughran and Hamilton (2016). This process differed from the traditional style of training of staff based on the apprenticeship activities that in some departments it was a strong practice and belief (Drexler, The architecture of the Ecole des Beaux Art, 1975; Dutton, 1991; Harrison & McKeon, 2008; Tafahomi, 2022). The program targeted to modernize the style of education of lecturers in the university based on the essential segments (Davey, 2013) by creating a foundation for the trainers (Given, 2008).

Despite the current structure of the PGC program in the university with three modules, the study demonstrated a wide range of modules based on titles, content, and structure in other universities due to the specification of the context (Curtin University, 2021; Derek Bok Center, 2021; Pretoria, 2021; UCT, 2021; Johannesburg, 2021). The results also illustrated that some of the universities focused on the students' diversity (ETSU, 2021; Derek Bok Center, 2021; Walden, 2021; Pretoria, 2021; Johannesburg, 2021), educational innovation (Curtin University, 2021; Temple University, 2021; Derek Bok Center, 2021; Swinburne, 2021; Walden, 2021; Witwatersrand, 2021), and research methods (Curtin University, 2021; Otago, 2021; Swinburne, 2021; Johannesburg, 2021), which were missing in the case of study. Although the significant parts of the precedents emphasized the teaching and learning,

assessment methods, and curriculum design and development in terms of essential criteria in the PGC programs, the countries with a wide arrange of departments, programs, and colleges included more options in the program to adapt to needs of the participants.

Despite the wide range of methods and approaches advocated in higher education, namely project-based, problem-based, evidence-based, research-based, and blended learning, educational approaches in the program were designed based on the linear structure that Craig (2016) criticized. The program was designed based on critical thinking, discussion, and presentation; however, the program did not lead the participants on a systematic project such as research-based activities (Groat & Wang, 2002; Tafahomi, 2022), project-based innovation (Kokotsaki et al., 2016) and problem-based research (Seifert & Sutton, Educational psychology, 2009) in both formative and summative assessments activities. In this regard, the program lost the opportunity to introduce the research methodology module to familiarize the participants with a systematic research activity (Serdenciuc, 2013; Healey et al., 2014).

The findings of the research demonstrated that the program focused on the cognitive skills of the participants, such as teaching, learning, and assessments (Hill & Houghton, 2001; Lee, 2005; Owens, 2007; Tafahomi, 2021a; 2021b) and some aspects of non-cognitive skills importantly teamwork, and metacognitive particularly self-planning and self-monitoring (Bold & Hutton, 2007). The cognitive aspects of the course constructed an essential foundation for the junior learners although non-cognitive and metacognitive skills were found through the storytelling of the senior participants and teamwork in the course (Denzin & Lincoln, 2018; Kokotsaki et al., 2016). A structured module in educational psychology could reveal essential skills to deal with students, staff, and institutions. While the application of the storytelling technique by the senior participants attempted to share experiences with the students, instructors, and staff in the institutions, relative courses could strengthen relationships between teacher and learner in educational centers in terms of motivation, interaction, and communication (Lee, 2005; Salkind, Encyclopaedia of educational psychology, 2008; Woolfolk, Educational psychology, 2016).

6. Conclusion

The PGCLTHE program focuses on teaching, learning, assessment, curriculum specification, and the online teaching structure as the program's main components. The program is supposed to lead the academic staff to run the assigned job based on the teaching activities in a routine process to serve their students. The course has targeted chiefly teaching activities. However, other essential activities of the academic staff do not appear in the curriculum structure, such as research, outreach, publication, and administrative responsibilities. Therefore, the program targets one of the pillars of the academic staff in terms of teaching, learning, and assessments.

The University of Rwanda started an academic process to train the junior staff through the program to enhance the quality of education at the university. The main reason for running the program is to strengthen the level of teaching for undergraduate programs in the university, in which the program's content has been adapted mainly to the joiner staff who engage in the undergraduate programs. The senior participants with master's and Ph.D. students expect related content, courses, and achievements concerning the graduate and postgraduate programs. In this missing aspect, the participants with a higher experience level are less fitted to the program's structure. The program's structure does not adapt to the teaching, learning, and assessment of the graduate and postgraduate programs, especially supervision, thesis, dissertation leading, and assessments of the students in the viva presentation.

The combination of the participants who are not at the same level creates a big gap between the participants' topics, discussion, progress, and engagement. The participants included different levels of knowledge, skills, abilities, and experiences, from tutorial assistants to senior lecturers. This variety of the levels results in designing the class's progress based on the lower level, which has fewer experiences in the academic position and needs more mentorship than senior participants. Although the opening of discussion by the senior participants is valuable for the junior participants to introduce other precedents, senior participants, after a while, the junior participants are marginalized from the mainstream of the class and activities, and the senior participants lead the program through dialogue, open discussion, and interactions in the sessions.

To improve the program's current curriculum, it is suggested that at least two modules be added to the program to fill the gap in the structure and, most importantly, research methodology and educational psychology. First, the research methodology module enhances the participants' engagement level in undergraduate and graduate programs. It involves them in essential activities such as research design, research process, analysis, and supervision

processes. This course covers the methodological gap in the program and enhances the participants' epistemological level to frame the research-based activities in their teaching modules. Second, knowing the specifications of the students through educational psychology, such as motivation, attitude, and personality, will be an excellent opportunity for the participants to promote their knowledge, skills, and ability about behavioral patterns and learning modes of teaching effectively in the programs.

6.1. Theoretical significance

Critical thinking: It is supposed that all thinkers critique the current trends to evaluate the system's stability or mechanism against the critics. Education, programs, or courses are based on logic designed to achieve a specific objective at a particular time and location. A critical thinking style leads the students and lecturers to reassess the educational contents and methods to discover possible opportunities to improve the system. Specifically, teaching higher education teachers requires seeding the applicants' critical thinking.

Participatory education: Teaching teachers in higher education is a participatory education rather than a classical style. The applicants' participation in restructuring the content, introducing methods and styles, and sharing their styles and experiences could open new perspectives for other participants and educators. Attention to the needs of the participants makes the program more adaptive to the challenges and problems in the current world.

Cognitive, non-cognitive, and meta-cognitive skills: despite the necessity of three skills in educational programs, the non-cognitive and metacognitive skills should take place in more segments in educating educators for higher education. Importantly, metacognitive skills lead the learning to design out style for self-learning, self-development, and self-evaluation. Metacognitive skills significantly affect the lifelong learning of the applicants so that they can continue their exploration of educational knowledge, skills, and methods.

6.2. Practical implications

Restructuring the program: The program needs to be revised based on the current style of education, such as research-based, question-based, and evidence-based. Notably, two courses, research methodology, and educational psychology, need to be added to the program to provide new insight into the research, the personalities of the educators and students, and the educational environment. This program restructuring could enhance its resiliency for the new generation of educators in higher education.

Research-oriented activities: Many universities have been oriented toward research-based institutions. Programs such as PGC should advocate this orientation to teach educators to do and teach research. Accordingly, the program needs to reorient toward research activities for educators in higher education. This step requires teaching the research methodology and designing research projects based on the applicants' specifications.

Final project activities: The PGC program needs a final project that encompasses and presents all the lessons learned through a project. The program's structure was divided into six final projects based on the six instructors (not the modules) with the same value. However, a final project could provide deeper insight into specific aspects of higher education programs such as law, health, or architecture. The final project requires a focus on problem-based research to deal with particular challenges in specialization programs.

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Author contribution statements

The author carried out the research design and implementation, analysis, and writing of the article himself without using AI applications.

Disclosure statement

The author reported no potential competing interest.

Ethical committee approval

This study has complied with the Research Publication Ethics stated in "Wager E & Kleinert S (2011) Responsible research publication: international standards for authors. A position statement developed at the 2nd World Conference on Research Integrity, Singapore, July 22-24, 2010. Chapter 50 in Mayer T & Steneck N (eds) Promoting Research Integrity in a Global Environment. Imperial College Press / World Scientific Publishing, Singapore". Since this is a Review Study, Ethics Committee Approval is not required. All responsibility belongs to the author.