Applying Barrie's Model to Effectively Develop Graduate Profile for the Defence University in Sri Lanka

F. M. M. T. Marikar, V. Jayasinghe and W. Abeyawickrama

General Sir John Kotelawala Defence University, Sri Lanka

Abstract: *A graduate profile shows the qualities of a graduate passing from a particular institution. However, it does not inform the specific attributes that a graduate develops through studies. As a result, universities tend to develop Graduate Attributes (GAs) which are Intended Learning Outcomes (ILOs), focusing on what the graduates of a university are capable of doing, which provide essential information for potential employers. Although General Sir John Kotelawala Defence University was established in 1981 and had offered degrees since then, it did not have properly documented GAs until recent. Hence, the specific attributes or capabilities of graduates were not properly documented/exhibited. Therefore, the possibility of applying Barrie's model for developing GAs for the General Sir John Kotelawala Defence University was assessed. Barrie's model was used as the framework and its three main components: Scholarship, Global Citizenship, and Lifelong Learning were mainly considered to maintain the holistic nature of the academic requirements. Input from syllabus documents and student/peer contributions were used in the process. In addition, Sri Lanka Qualification Framework (SLQF) published by the University Grants Commission (UGC) in Sri Lanka was also consulted. Eleven GAs were identified to include Discipline based knowledge, Problem solving skills, Communication skills, Team working ability, Management and entrepreneurship, Information technology skills, Leadership ability, Endurance, Professionalism, Lifelong learning skills, and Critical thinking. Under each GA, benchmarks were also developed with an evaluation framework (including measures to obtain employer/student feedback), in order to execute and also evaluate the level of achievement of the GAs by graduates. This study indicates that Barrie's model supported by SLQF can be successfully used to design/develop specific GAs while further facilitating its execution and evaluation.*

Key Words: Graduate Profile, Graduate Attributes, Barries, SLQF

LITERATURE REVIEW

This report is on the Graduate Attributes (GAs) developed for the General Sir John Kotelawala Defence University (KDU). It initiates with an analysis of the background elaborating how the process of developing of Graduate Attributes for the university has undergone. Then, a few of the specific features of the GAs concerning the university are analytically elaborated. Later,

Correspondence concerning this article should be addressed to F. M. M. T. Marikar, E-mail: faiz@kdu.ac.lk.

the Sri Lankan context and local approaches of GAs are discussed. Further, what KDU has developed so far under GAs are discussed. Then the Intended GAs for the university are introduced with relevant rationales for the mechanisms to evaluate the GAs focusing on the reliability, validity and currency. Finally, the report ends with a conclusion. As a socially minded, civically-engaged institution, our core values and graduate attributes are the bedrock of our student experience. Graduate attributes refer to the skills, knowledge and abilities of our graduates, beyond disciplinary content knowledge, that are applicable in a range of contexts in their lives. They advance the development of academic, specialist and technical skills. Based on extensive consultation with stakeholders, the following core graduate attributes will be prioritised for the lifecycle of this Academic Strategy.

Forty to sixty years ago, university education was considered a privilege and a prestigious opportunity in the traditional beliefs; however, the anticipated output of a university has rapidly changed due to the societal changes based on the development of technology and the reforms in the economic systems of the world. Today, universities have become corporate organizations which are in a competition for achieving its goals since the sustainability and progress of a university is based on the achievements of its student population (Biggs and Tang, 2009, pp. 1-3). At the initiation of this change, the requirement was the cognitive and constructive alignment of university teaching, students'/teachers' learning and assessment process to identify whether the students have achieved the stipulated achievements according to the benchmarks determined by the bodies of tertiary education.

Even though the higher education process has been achieving its goals in the stereotyped environment with quality teaching, dedicated learning and scientific assessments, the graduates have not been credible enough to consider themselves with higher employable skills. The studies have identified that there is a wider gap between the real requirement of the society and what the graduates achieved at the universities (Bennett et al., 1999). To overcome this issue, first the development of graduate profile was considered since the graduate profile of a university shows what sort a graduate passes out from that university. The profile mainly shows the outward appearance of the graduate since it focuses on how the graduates should behave in the professional and corporate world. The universities' mission, vision and objectives were mainly based on developing the graduate profile.

Since it is very difficult to determine that each feature of the graduate profile is addressed in classroom level and what mechanism are applied in developing the graduate profile in the classroom level, conducting teaching learning activities (TLAs) in classroom level to achieve salient features of the graduate profile was not realistic. Further, it seems that graduate profile promotes declarative knowledge more than the functioning or procedural knowledge. Further, the students' profile or a university's credibility of its achievement are not enough to make the graduates higher employable. There is something missing; this missing components have been analysed for a long time in the world of tertiary education, and still the process has not been over. Many concepts have been introduced as the results of the studies which focus on what graduates' are required to be highly employable in the present world. Some of these concepts are Outcome Based Education (OBE), Career Guidance Units, Internship for Professional Exposure and Curriculum Reviews focusing on Employability. Another salient outcome of these studies is the concept identified as Graduate Attributes (GAs). Even though many facets of GAs have been questioned, analysed and further discussed, most of the leading universities have changed their stance from Graduate Profile to Graduate Attributes or they have developed GAs under their Graduate Profile (Bond et al., 2017).

What is meant by GAs? Out of many comments, definitions and arguments only four sections of the literature directly relevant to this study have been discussed for providing a background for this report. Biggs and Tang (2009, p64) identify that GAs are the Institutional level Intended Learning Outcomes (ILOs) focusing on "what the graduates of the university are supposed to be able to do [based on their skills and attitudes and what they believe as values for the betterment of the society]", and further they elaborate the mechanisms of GAs as:

> "*These are outcome statements at institutional level to the effect that graduates of any of university x's degree programmes will display certain attributes that employers would find attractive, and that hopefully might distinguish them from graduates from other universities. Such attributes would include creativity, independent problem solving, professional skills, communication skills, teamwork, lifelong learning and so on.*" Biggs and Tang (2009, p. 4)
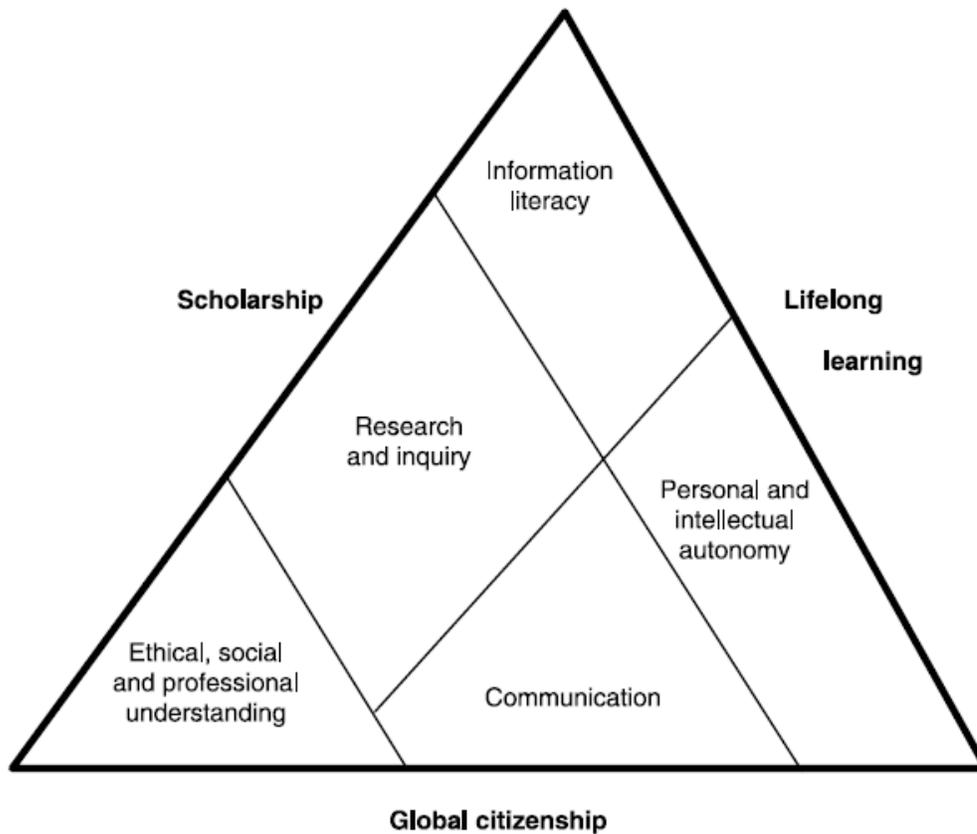
However, just a list of expectations that students could achieve is not the real GAs since they should be matched with professional and societal expectations of the graduates also. Ironically, these expectations are also created by the society and various professional bodies due to various changes taking place in the society time to time.

Further, Star and Hammer (2008) promote GAs highlighting their potentials as properly developed GAs can be useful to address issues relevant to "student transition into higher education" and how to maintain the lifelong progress of the students through "across disciplinary curricula". This has created the concepts that GAs should consist of transferability skills or potentials.

Nonetheless, there is a general consensus that assessing GAs is essential to its successful implementation. This implies our taking to heart the theoretical principles of assessment. For instance, within a framework of assessment for learning, GAs would be best assessed in a model in which both students and instructors engage in self-evaluating acquisition and/or pertinence of a specific GA to the learning process where the criteria for each GA is detailed and explained for both stakeholders (Hughes & Barrie, 2010). Barrie (2004) elaborates these concepts based on three facets that curriculum developers should focus on considering the dynamic and unique nature of GAs. Accordingly, three major concepts have been identified considering the holistic nature of the academic requirements as "Scholarship", "Global Citizenship", and "Lifelong Learning" (Figure 1). To achieve these attributes some sub categories are identified as "Research and inquiry" "Information literacy", "Personal and intellectual autonomy", "Ethical commitment, socially and professionally" and "Communication skills and commitment". All these are interconnected as shown in the following figure. By addressing these features one by one or with a holistic approach, the universities have the ability to make their students be productive job seeker with higher employable status. The main reason to develop the university needed to create GAs university didn't had any.

Figure 1
Interrelations between two levels of graduate attributes

Information
literacy

Scholarship

Lifelong

learning

Research
and inquiry

Personal and
intellectual
autonomy

Ethical, social
and professional
understanding

Communication

Global citizenship

Source: Adapted from Barrie (2004)

The University of Edinburgh has developed its GAs focusing on Barrie's model identifying some aspects as skills to be developed under each main and sub components highlighted in Barrie's model. In developing the GAs for the university, those descriptions and the descriptors were also considered since our processes become easier if we have a better understanding of the practice of other universities as far as GAs are concerned. The University of Edinburgh explains its purpose of developing GAs as:

> *The Graduate Attribute webpages are designed to help students and staff understand what Graduate Attributes are, how they impact on them individually and examples of how the skills and mindsets of the University's Graduate Attributes Framework can be developed and supported.* Edacuk. (2017)

Further, the GAs of the University of Edinburgh has been developed classifying the GAs into two categories as GAs relevant to "Mindsets" and GAs relevant to "Skill Groups". Further, Mindsets are elaborated focusing on the relevant reflective practice of both students and academic staff, whereas Skill Groups are elaborated with a description of "Example Skills" and "Key Aspects Include". Further, a separate section is allocated to elaborate how students absorb GAs in the university context.

Further, Programme and course ILOs can be developed focusing on these concepts; however, they should be based on these findings. The following concepts could be used as a framework when developing GAs in programme and course work level. In fact, GAs in Faculty based level is the ILOs of the Degree programmes offered by the faculties.

> **"1** *Describe and explain the conceptual framework and practical skills of the [academic discipline's] profession.*
> **2** *Analyse this framework of accounting and apply the practical skills to real-life [academic discipline's] situations.*
> **3** *Communicate effectively as a professional with clients and colleagues in real-life [academic discipline's] situations.*
> **4** *Operate effectively and ethically as a team member in real-life [academic discipline's] situations."* Biggs and Tang (2009, p. 69)

GRADUATE ATTRIBUTES IN SRI LANKANS CONTEXT

With a view to acquiring proper understanding of the local context, how the concepts of GAs are applied in University sector are discussed. Many of the Sri Lankan universities have not considered in developing GAs yet; however, some have already done extensive works in this regard. For example, Sri Lanka Institute of Information Technology (SLIIT) has developed GAs (SLIIT.lk, 2017) similar to the GAs developed by the University of Edinburgh.

The necessary concepts based on many aspects of students' achievement in the Sri Lankan context are extensively elaborated in the Sri Lanka Qualification Framework published by the University Grants Commission (UGC) in Sri Lanka (Weerasooriya *et al.*, 2016). There, learning outcomes are considered "… statements that describe what learners should know, understand and can demonstrate upon the completion of a course or study programme, (Weerasooriya *et al.*, 2016)". Further, the ILOs in SLQF are determined based on "the attributes of the qualification holders" and specific outcomes of a study programme identified as "level descriptors" (Weerasooriya *et al.*, 2016); furthermore, both attributes and descriptors are developed based on the "K-SAM Model {Knowledge, Skills, Attitudes and Mind-set Paradigm} (Weerasooriya *et al.*, 2016). Further, in the same publication, the Learning Outcomes (LOs) are categorized focussing on the Core Areas stipulated by the K-SAM model and "Student-centred teaching and learning methods are suggested (Weerasooriya *et al.*, 2016)". Since these aspects are highly relevant to the development on GAs for a faculty based on its course programme following chart is made focusing on the ideas explained by the aforesaid SLQF publication (Table 1).

Table 1
UGC recommendation for a standard graduate profile

Categories of Learning Outcomes (LOs)	Core Area	Student-centred teaching and learning Methods
1. Subject / Theoretical Knowledge	Knowledge	Independent learning activities, interactive lectures, team-based learning, and other small group activities
2. Practical Knowledge and Application		Problem-based learning, team-based learning, inquiry-based learning, practical classes, laboratory sessions, role play
3. Communication	Skills	Student presentations, role play, debates, dramas
4. Teamwork and Leadership		Group projects, industrial training, small group learning; e.g. problem-based learning, games
5. Creativity and Problem Solving		Assignments, projects, small group learning activities; e.g. problem-based learning
6. Managerial and Entrepreneurship		Group projects, industrial training, small group learning; e.g. problem-based learning, games, simulated training, industrial (workplace-based) training
7. Information Usage and Management		Assignments, presentations, projects, case studies
8. Networking and Social Skills		Student presentations, role-play, debates, dramas
9. Adaptability and Flexibility		Group projects, industrial training, small group learning; e.g. problem-based learning, role plays, portfolios
10. Attitudes, Values and Professionalism	Attitudes, Values, Professionalism and Vision for Life	Group projects, industrial training, small group learning; e.g. problem-based learning, role play, portfolios
11. Vision for Life		Portfolios, reflective practice
12. Updating Self / Lifelong Learning	Mind-set and Paradigm	Portfolios, reflective practice

Source: adopted and adapted from Weerasooriya *et al.*, 2016, pp. 13-14

SLQF has identified qualification descriptors under each qualification category from category one to category twelve of SLQF Levels. Furthermore, these descriptors are analysed based on certain concepts as subsets, and they are "Purpose and Scope of Qualification, Attributes of Qualification Holders, Minimum Admission Requirement, Volume of Learning, Designation, Qualifiers, Abbreviation and Progression" (Weerasooriya *et al.*, 2016). However, Purpose and

Scope of Qualification and Attributes of Qualification Holders are relevant to our context; therefore, those two subsets under SLQF Level 5 Bachelor's Degree have been analysed. For the easy assimilation of the readership into the relevance of SLQF Level 5 qualification descriptors with the context based on this report an extract from the main chart of the qualification descriptors is presented in Table 2.

Table 2
Qualification descriptors

SLQF Exit level	SLQF Level 5
Qualification Type	BACHELOR'S DEGREE
Purpose and Scope of Qualification	The purpose of this qualification is to prepare a graduate with a broad knowledge on theory, practice and methodology of disciplines that enable them to bear responsibility in an academic or professional environment.
Attributes of Qualification Holders	The qualifications holders: - Should know about the well-established principles and content in their fields of study. - Should be information literate; what they can do with what they have acquired from wide learning, use appropriate techniques to initiate and undertake analysis of information, to identify problems and find solutions to them. - Should display qualities and skills necessary for employment or further learning. - Should be able to communicate information effectively to specialist and wider society. - Should be able to acquire additional competencies; pursue further learning; be a change agent; assume responsibility for decision making.

Source: extracted from Weerasooriya *et al.*, 2016, pp. 16-17

Further, SLQF has identified Level Descriptors matching Categories of Learning Outcomes with SLQF Levels (Table 3). In this context Categories of LOs of SLQF level 5 have been analysed and the same is presented below as an extract taken from the overall level descriptors of SLQF (Weerasooriya *et al.*, 2016).

METHODS

As the first step of developing GAs for the University, we analysed the existing documents. This included KDU mission, vision, objectives, Officer Cadets' Honour Code and other documents relating to developing a graduate profile for KDU. The analysis of these various documents highlighted that KDU graduates are expected to possess the following skills and abilities: Knowledge, Professionalism, Information Literacy, Communication Skills, Teamwork and Leadership, Ethics and Values, Lifelong learning, Management and Entrepreneurship, Creativity and Problem solving, Endurance, and Global Scholar and Researcher. These skills and abilities are to be acquired by learners via three Bachelor of Science degree programmes, in Logistics Management, Management and Technical Sciences and Social Science, offered by three academic departments: Management, Social Sciences and Languages. Department of Languages offer tailor made English courses for the three degree programmes. The Graduate Attributes were designed considering the above-mentioned aspects.

As the next step, we analysed requirements of the Sri Lanka Qualification Framework (SLQF) published by the University Grants Commission (UGC) (Wickramsinghe & Campus, 2015). SLQF identifies qualification descriptors under each qualification category based on twelve of SLQF Levels. The descriptors were listed as Purpose and Scope of Qualification, Attributes of Qualification Holders, Minimum Admission Requirement, Volume of Learning, Designation, Qualifiers, Abbreviation and Progression (Wickramsinghe & Campus, 2015). Among these, Purpose and Scope of Qualification and Attributes of Qualification Holders are directly relevant to our context; therefore, those two subsets under SLQF Level 5 were analysed.

Further, categories of LOs of SLQF Level 5 have also been analysed. We then analysed existing graduate profiles and GAs of universities in Sri Lanka and abroad. This include University of Edinburgh (University of Edinburgh, 2017), which also followed Barrie's model in developing GAs. We did not find many universities in Sri Lanka who had published their graduate profiles or GAs. The only documented evidence found was from Sri Lanka Institute of Information Technology (2017). Based on the above analysis, relevant features were collated. In order to filter them and identify the exact features relevant to General Sir John Kotelawala Defence University, discussions were held with teachers and students of the faculty for a period of two years which involves lot of discussions, comparison and select the best module. Participants were enquired about specific skills and attributes that individual modules should address in order for learners to complete the respective modules, and to prepare them for employment. They were also asked about how individual modules contribute to the overall programme ILOs.

Table 3
Level descriptors

Categories of Learning Outcomes	SLQF Level 5
1. Subject / Theoretical Knowledge	Demonstrate knowledge and understanding of concepts and principles of the areas of study. Collect, Analyse and interpret quantitative and qualitative data.
2. Practical Knowledge and Application	Develop arguments and make sound judgments in accordance with basic theories and concepts of the areas of study. Apply knowledge and understanding of concepts and principles of the areas of study.
3. Communication	Present information, ideas, and concepts efficiently and effectively.
4. Teamwork and Leadership	Exercise personal/team responsibility, and leadership in the professional environment/work place.
5. Creativity and Problem Solving	Develop arguments and make appropriate judgments in accordance with theories and concepts of the areas of study.
6. Managerial and Entrepreneurship	Take initiative, assume personal responsibility and demonstrate accountability.
7. Information Usage and Management	Demonstrate specialized transferable skills related to ICT skills.
8. Networking and Social Skills	Ability to work in teams and provide leadership.
9. Adaptability and Flexibility	Develop appropriate strategies for adapting to changing environments.
10. Attitudes, Values and Professionalism	Exercise initiative, personal responsibility and accountability in tasks performed. Demonstrate positive attitudes and social responsibility.
11. Vision for Life	Clearly identify where one wants to be and develop long term goals accordingly. Acquire new competencies that will enable them to assume major responsibilities.
12. Updating Self / Lifelong Learning	Undertake further training and develop additional skills that will enable them to make sound decisions. Identify ways of independent learning and lifelong learning.

Source: extracted from Weerasooriya *et al.*, 2016, pp. 26-27

This study was considered about total literature about graduate profile and created a productive graduate profile to a Defence University in Sri Lanka.

After the document analysis and discussions, we collated the information based on the categories in Barrie's model. As the process required to include features of three different disciplines, we developed descriptors under each GA to reflect the variations. These descriptors seem to be more user-friendly and more perceptible than the GAs which come as direct statements. Moreover, they are helpful for the academics in the faculty to deconstruct the GAs to create the programme ILOs, ILOs relevant to academic subjects and even the ILOs of a teaching session. After finalising the GAs and their descriptors, another round of discussions and analysis of the prepared GAs were done in order to revise the GAs. In this, we showed the sample GAs to participants to ensure if the skills and attributes that they mentioned in the previous round of discussions were incorporated in the GAs. We also went through individual programme ILOs to ensure that the features of those are reflected in newly developed GAs. In order to measure the effectiveness of using Barrie's model, we used a checklist which contained the content of the model. In each document analysis as well as discussions, we used the checklist to measure if the model can be applied to analyse the data.

RESULTS

The final outcome was eleven GAs and their descriptors as mentioned below in KDU Graduate profile. These reflect the levels of Barrie's model. Relevant phrases from the model are underlined/given in brackets.

KDU GRADUATE PROFILE

As far as determination of graduates' achievement at KDU is concerned, for a long time KDU has practiced a mission, a vision, objectives and Officer Cadets' Honour Code. However, in 2017 KDU initiated the process of developing Graduate profile considering the SLQF LOs. Accordingly an initial draft was proposed with the assistance of CTHE 4th and 5th Batches to be circulated among the key academic holders of KDU, and the expected features of a KDU graduates to have is as mentioned below.

KDU Graduate Profile:
The graduate of the Kotelawala Defence University will be a disciplined, courageous individual who is competent in the discipline in which he/she excels, and will always be loyal to the motherland in the discharging of his/her responsibilities.

A KDU graduate is expected to have:
Discipline based knowledge
Problem solving skills
Communication skills
Team working ability
Management and entrepreneurship
Information technology skills
Leadership ability
Endurance
Professionalism
Lifelong learning skills

Critical thinking
Scientific reasoning
Source: attached documents of KDU/SDC/AD/02

THE INTENDED GRADUATE ATTRIBUTES FOR THE UNIVERSITY

According the guidance given by the Dean of all faculties, actions were initiated to develop the GAs for the faculty level. First a meeting was held with the participation of the representatives of the three faculties. These representatives were appointed by the deans. Thought sharing sessions were conducted to get a better picture of the intended GAs for the KDU and what areas should be considered in this venture. Focusing on many aspects and mainly analysing the literature including the literature mentioned in this report, following GAs have been developed for the faculty level (Figure 2 and Table 4). Collected all faculty details and input into the spreadsheet and aligned and taken the best out of it.

Figure 2
Alignment of attributes.

DISCUSSION

We were able to identify and design eleven GAs for the KDU based on both the document analysis and discussions as described in the methodology section. These GAs reflect the skills and abilities that graduates should possess. However, we were not able to collect data from the employers to analyse the skills and abilities that they would expect these graduates to possess. We encounter this as a limitation and hence further revision of these GAs based on data gathered from the employers is needed. This study also highlighted that Barrie's model can be successfully used in order to design and later develop GAs in the Sri Lankan context. It can also be used to categorise specific skills and attributes under broad categories. The successful application of the model is also recognised by Barrie et al. (2004) in a study that reviewed the integration and assessment of graduate attributes in 36 Australian universities. The checklist method in data analysis is found to be useful in categorising the data effectively.

Table 4

Graduate Attributes of KDU and their descriptors (KDU, 2018)

GA	Descriptor
Graduate Attribute one: Critical acquisition of an in-depth academic and professional knowledge with a clear assimilation of its practice for a lifelong autonomous learning Graduates of KDU should be knowledgeable about the analytical acquisition of concepts and principles relevant to Management, Social Sciences or Strategic and Defence, and the practical use of these concepts and principles scientifically analysing their pros and cons according to their applicability in realistic situations in the modern context. [Scholarship/Professional understanding]	Graduates of KDU should be knowledgeable about the analytical acquisition of concepts and principles relevant to Management, Social Sciences or Strategic and Defence, and the practical use of these concepts and principles scientifically analysing their pros and cons according to their applicability in realistic situations in the modern context. [Scholarship/Professional understanding]
Graduate Attribute two: Effective and realistic practice of academic literacy and macro and micro communication skills with the knowledge of using the appropriate discourse to solve any cropped-up issues or problems as a team	Graduates of KDU should have the ability to handle complex issues systematically to make sound judgements confidently and effectively applying receptive and productive skills of verbal communication with the nuances of the nonverbal communication in academic and professional settings with the ethical and social understanding to be an effective team member and a leader to find effective, efficient and sustainable solutions with novel ideas and approaches as a team for the betterment of the corporate and academic world and the social environment. [Scholarship/Global citizenship]
Graduate Attribute three: Entrepreneurship for the sustainability of a better social life with the practice of ethics and values inculcated through the acquisition of academic and professional knowledge	Graduates of KDU are capable of creating opportunities and solving problems to become self-sufficient entrepreneurs demonstrating unique academic disciplinary competencies in shouldering social, ethical and professional responsibilities with

	effective application of personal and intellectual autonomy as responsible citizens. [Scholarship/Lifelong learning]
Graduate Attribute four: Enthusiastic communication with the passion for the scientific acquisition of information and logical application of such information to manage social networking in the professional, academic and corporate settings.	Graduates of KDU have high propensity to be disciplined, competent and intensified managers or military leaders accomplished with the profound respect for different cultures and acknowledgement for wider societal beliefs to be the trend setters for the feasibility of exercising actions with the cordial relationship with their subordinates as well as their superiors in professional establishments, academic institutes and corporate sectors with a great empathy and consciousness. [Global citizenship/Scholarship]
Graduate Attribute Five: Clear visions for lives with adaptability and flexibility to espouse the deep-seated beliefs and conscience for preserving humane attitudes, societal values and professional expectations	Graduates of KDU have had cumulative exposure to research and inquiry to identify wider ethical, social and professional beliefs to enhance their conscience of how to achieve academic, corporate or military goals with the application of flexible and adaptable mechanisms sharpening their visions [Scholarship]
Graduate Attribute Six: Autonomous learning focusing on up-to-date knowledge with diachronic and synchronic analysis to accomplish sustainable process of learning	Graduates of KDU are capable in accomplishing the lifelong learning goals by adjusting their learning curves to acquire up-to date knowledge and making the existing knowledge to generate new concepts relevant to unearthed knowledge and successful application of the existing theories to ground pragmatic theories to continue lifelong learning. [Lifelong learning]

FUTURE DIRECTION AND IMPLICATION

The Intended GAs for the KDU should be evaluated focusing on the reliability, validity and currency. Various mechanisms are available and out of them suitable mechanisms can be selected or new mechanisms can be as grounded mechanisms. Further, SLQF has emphasises that having a well-established assessment process to evaluate whether the students have achieved or developed their status to match the stipulated LOs (Weerasooriya *et al.*, 2016). Hence, GAs can be evaluated through testing the students' achievements based on LOs.

CONCLUSION

The report has extensively elaborated the GAs developed for the of KDU with the background and the rationale for the process of developing these GAs. Further, it reveals the relevant literature and the mechanisms of developing GAs with the emphasis on the sustainable evaluation process. Finally, it is emphasized that more reforms should be introduced for these Intended GAs especially when they are in actions since such reforms will be very effective to fine-tuning these GAs.

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