Adopting an Outcome-based Approach to Accreditation by a Quality Assurance Agency

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Abstract

A major responsibility of Hong Kong Council for Academic and Vocational Qualifications (HKCAAVQ) is to assure the quality of higher education programmes offered by private education institutions. Since 2008, HKCAAVQ has adopted an outcome-based approach in its accreditation process. This paper reviews the impact outcome-based accreditation has on the institutions and the quality of their study programmes, and explains how the outcome-based approach has made the accreditation process more effective in assessing the design of a programme, and how outcome-based teaching and learning (OBTL) was advocated through accreditation guidelines and associated tools.

Through an analysis of accreditation exercises conducted over the years, the paper illustrates that the accreditation process has been driving the gradual adoption of OBTL by institutions. The paper also explains how the outcome-based approach has helped address a concern in connection with a proliferation of degree level programmes in Hong Kong over the past decade.

1. Introduction

Outcome-based teaching and learning (OBTL) has been widely adopted by higher education institutions in Hong Kong. In the public sector, the University Grants Committee, the funding agency for publicly funded higher education institutions, started advocating OBTL in 2005 [1]. Since then, local universities have taken various measures, including internal training to educate their teaching staff on the concept and application of OBTL, to promote, implement, and study the effectiveness of OBTL. These activities have been reported in the literature.

An example explaining the major steps taken by an institution in implementing OBTL in an English language programme was reported in [2, 3]. Wong and Cheung [4] reported the development of a computer science programme using the OBTL approach, and presented student evaluation results confirming the teaching effectiveness of the approach. Deneen et. al. [5] developed specific instrument to study the perceptions of OBTL of students in a teacher education programme. Wang [6] reported an

evaluation on the implementation of OBTL to find out both students' and teachers' perceptions of OBTL adopted at courses in an undergraduate English language programme. The findings suggested that both students and teachers hold a generally positive attitude towards OBTL. The report also highlighted some important factors on successful implementation, such as clear Course Intended Learning Outcomes (CILOs), careful mapping of CILOs to Programme Intended Learning Outcomes (PILOs), and alignment between CILOs and teaching and learning activities, and assessment tasks. Fung and Cheung [7] reported the teachers' perceptions on the teaching effectiveness of OBTL on sub-degree programmes. While the authors have no doubt that OBTL as a quality assurance mechanism is effective on some of key learning outcomes, such as subject knowledge, they argued that the OBTL framework may not be adequate to define and measure the effectiveness of whole personal development, a particularly important needs of sub-degree students.

While the adoption of OBTL in the public sector in Hong Kong has been reported in the literature, publications on the situation in the private sector seem lacking.

In the private sector, Hong Kong Council for Academic and Vocational Qualifications (HKCAAVQ) is responsible for quality assuring study programmes offered by non-self-accrediting institutions which are mostly self-financing. In 2008, the Hong Kong Government launched the seven-level Qualifications Framework (QF) with outcome-based level descriptors. Since then, HKCAAVQ adopted an outcome-based approach in its accreditation process. With almost a decade of experience, this paper reviews from the perspective of an external quality assurance agency the impact outcome-based accreditation has on the education provision in the private sector in Hong Kong. This paper explains how the outcome-based approach was advocated through accreditation guidelines and associated tools, and analyses how OBTL has been adopted by the private institutions over the years.

This paper will first describe the Four-stage QA Process used by HKCAAVQ to discharge its statutory function as an Accreditation Authority in Hong Kong. In Section 3, the major channels by which HKCAAVQ advocates OBTL in Hong Kong are explained. The types of outcome of HKCAAVQ's accreditation exercises are explained in Section 4, followed by an analysis of the accreditation outcome over the years to illustrate the adoption of OBTL by institutions. Section 6 concludes the paper with a discussion on the latest development of HKCAAVQ on the outcome-based approach.

2. HKCAAVQ's Four-stage QA Process

Private institutions are required to undertake accreditation by HKCAAVQ if they want their programmes to be recognised under the QF. HKCAAVQ adopts a Four-stage QA Process, namely Initial Evaluation

(Stage1), Learning Programme Accreditation (Stage 2), Programme Area Accreditation (Stage 3) and Periodic Review (Stage 4), as shown in Figure 1.

Figure 1. HKCAAVQ's Four-stage QA Process

The first three stages aim to accredit institutions at the institutional, individual programme, and programme area levels respectively. Institutions accredited at the first stage are considered to have an institution-wide system in place to assure the quality of their learning programmes. At the second stage, an individual programme from an institution undergoes an accreditation process to determine whether it can be accredited and recognised under the QF. Each accredited programme is subject to re-accreditation before the expiry of a validly period which is specified when the programme is accredited. For mature institutions with robust QA mechanism and are experienced in operating accredited programmes, they may apply for entering into the third stage. Institutions at this stage are granted a certain degree of autonomy to offer learning programmes within specific programme areas without the need to go through the HKCAAVQ's Stage 2 accreditation process. The last stage is a regular review on those programme areas of institutions that have reached the third stage.

For each accreditation exercise, HKCAAVQ forms an accreditation panel to review accreditation documents submitted by an institution, and conduct a site visit to the institution's teaching venue. Based on the evidence gathered from the accreditation documents and site visit, the panel assesses whether the institution/ learning programme/ programme area meets the accreditation standards and criteria.

3. Advocating OBTL in Hong Kong

The process of accreditation and the accreditation criteria and standards are documented in a set of HKCAAVQ's accreditation guidelines, submission guides and guidance notes (hereafter collectively referred to as the Guidelines), which is publicly available from the HKCAAVQ's website[8]. HKCAAVQ advocates OBTL by requiring that a programme to be accredited be out-come based, and stipulating some key outcome-based elements in the Guidelines. The following list some examples stated in the Guidelines.

Example 1

It is stated in the Guidelines that the purpose of Learning Programme Accreditation is to "*evaluates a learning programme to ensure that the standards of the stated programme objectives are met, and learning outcomes are delivered commensurate with the claimed QF level of competency, with reference to the Generic Level Descriptors (GLD)*". The GLD, defined in the QF, are outcome-based descriptors that describe the common features of qualifications at the same QF level, and specifies the outcome standards expected of the qualification at each QF level.

Example 2

The Guidelines specifies the standards required of a learning programme:

(a) Under the accreditation criterion *"Programme Objectives and Learning Outcome"*, "*The learning outcomes should reflect the stated programme objectives, which are tested through assessment. The evidence from assessments must show that the QF level of the learning outcomes correspond to the GLD and other relevant documents.*"

(b) Under the criterion *"Teaching and Learning"*, it is required that *"The teaching and learning activities designed for the programmes must be effective in delivering the intended learning outcomes and programme content."*

(c) Under the criterion *"Student Assessment"*, it is required that *"Assessments must support effective learning and enable students to demonstrate achievement of the learning outcomes and the required standards. The assessment methods and techniques used for the programmes must be valid, reliable, fair and sufficient to reflect the learning outcomes at the claimed QF levels."*

Example 3

The Guidelines includes some suggested evidence that institutions can provide to demonstrate that their programmes are outcome-based and meet the accreditation criteria. Some tools, such as templates for presenting the evidence, are provided in the Guidelines. The following list some suggested evidence and tools.

- Rationales for the chosen teaching and learning methods, and mode of teaching (e.g. lectures, tutorials, laboratories, practical demonstration, work placement, etc.) against the learning outcomes
- An outline of assessment methods and weightings for each subject / module and rationales for how the assessment methods reflect the learning outcomes at the claimed QF level
- List of programme objects
- List of PILOs
- A table that maps programme objects against PILOs

- A table that shows the contribution of each modules to the PILOs
- A table that maps modules to the (outcome-based) GLD of the QF
- The module outline of each module with intended learning outcomes and their mapping against assessments

Besides advocating OBTL through the Guidelines that require institutions to provide evidence on adopting an outcome-based approach in programme design and delivery, HKCAAVQ conducts regular, thematic as well as tailor-made in-house training workshops to various stakeholders, including institutions and panel members, to enhance their understanding on the accreditation process and the OBTL requirements. Topics such as outcome-based curriculum design, writing outcome statements, alignment of intended learning outcomes and assessment tasks are often covered in these training activities.

4. Accreditation outcome

After completion of an accreditation exercise, HKCAAVQ will issue an accreditation report detailing the major observations and discussions by the accreditation panel, and the accreditation outcome. There are three types of outcome: approval, approval with conditions, and non-approval. The accreditation report may also optionally include recommendations and advice for improvement.

For approval with conditions, the institution is considered by and large ready to gain an accreditation status but there are certain critical gaps to be closed through the fulfillment of the conditions. Conditions to be fulfilled prior to the commencement of the validity period of the accreditation status are called **Pre-conditions**. Conditions to be fulfilled before a specified date within the validity period is called **Requirements**. A typical example for a Pre-condition in Learning Programme Accreditation is the revision of some of the PILOs and corresponding revision of outlines of relevant courses for better matching of PILOs with programme objectives. A typical example of a Requirement is the installation of certain laboratory equipment to support the delivery of a senior year course of a four-year degree programme. The circumstance of the former example warrants a Pre-condition because it will have impact on the learning experience of the students upon their admission to the programme. In other words, the issue needs to be resolved before the programme can admit students. In the latter example, as long as the required equipment is ready before the scheduled delivery of the course, there will be no negative impact and hence a Requirement with an appropriate due date for its fulfillment is adequate.

As the HKCAAVQ accreditation requires learning programmes to be outcome-based, any gaps in this regard identified by the accreditation panel should be reflected in the conditions of approval. By analyzing the numbers and nature of the conditions that are related to OBTL as stated in accreditation

reports over the years, it should reveal on one hand the extent OBTL has been actually adopted by institutions, and on the other hand how HKCAAVQ has been driving the adoption of OBTL over time.

5. Analysis of accreditation outcome

An analysis on the accreditation outcome was conducted on 127 Learning Programme Accreditation reports issued since 2009 covering about 170 local academic programmes. Reports issued before 2009 were not included in the analysis because OBTL was not an accreditation requirement before the launch of the QF in May 2008. Reports on non-local learning programmes were also not included because the design and development of these programmes were mainly conducted by the overseas partners of local institutions, and hence input from local institutions in the programme design was usually limited. Reports on the other three stages of the HKCAAVQ's Four-stage Process were also excluded from the analysis because of their relatively small numbers. An institution needs to undergo Initial Evaluation (IE) only once, provided that it continues to operate accredited programmes at the QF levels covered by its IE status. There are less than 20 IE reports in total. The number of institutions attaining the third stage is also limited, and hence the numbers of reports for the third and fourth stages are even less. For a meaningful analysis, this paper focuses on reports of Learning Programme Accreditation.

5.1 Quantitative analysis

Figure 2 depicts the findings from the analysis of the accreditation reports. The graph represents the percentage of reports in each year that have one or more conditions related to OBTL. It can be seen from the graph that up to year 2011, the percentage was on the rise in general, and there was a downward trend after 2011. The rising trend can be understood as the increasing emphasis HKCAAVQ has put on advocating OBLT in its accreditation exercises, and the general downward trend after 2011 shows that institutions have gradually embraced OBLT and implemented it in their programmes.
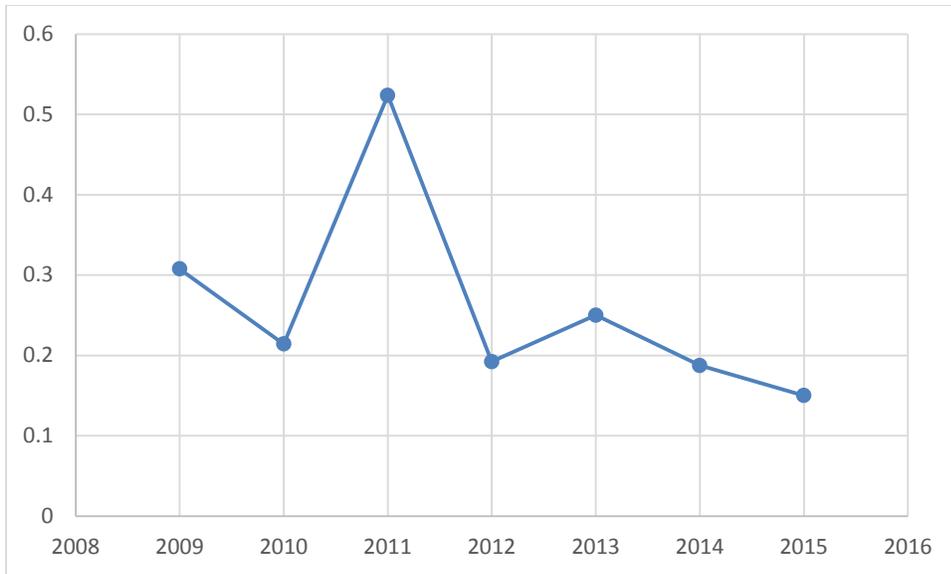
Figure 2. Percentage of reports that have OBTL-related conditions

While the change from 2009 to 2011 was on the rise in general, the percentage actually fell in 2010. This can be explained if the percentage of reports having recommendations on OBTL-related issues are taken into consideration.
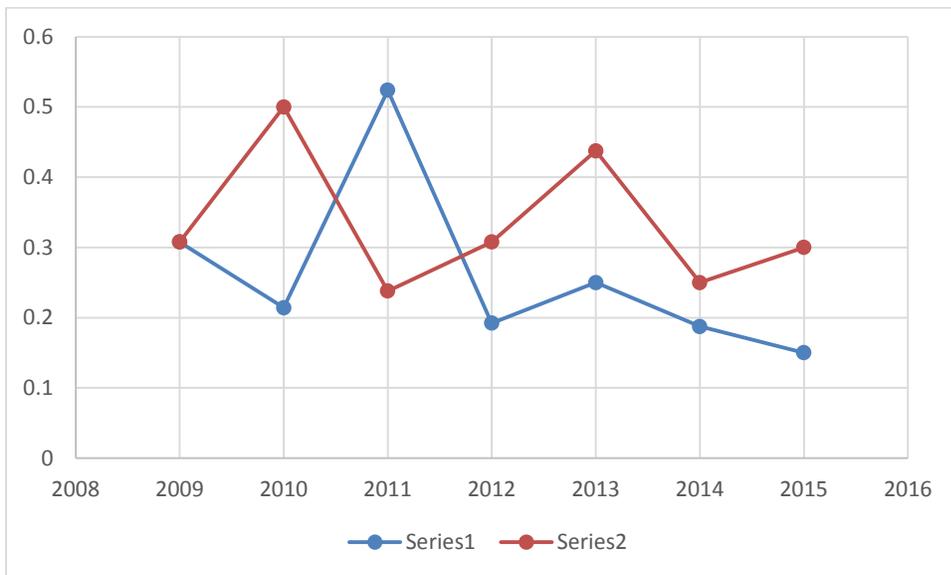

Figure 3. Percentage of reports that have OBTL-related conditions (Seies1)
and recommendations (Series2)

As shown in Figure 3, at year 2010 the percentage on recommendations reached the maximum while the percentage on conditions dropped at the year. This could be understood as the way HKCAAVQ has adopted in advocating the OBTL requirements. At that early stage when the OBTL requirement was still

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relatively new, institutions were given recommendations to improve. But in the following year when institutions were expected to be more experienced in OBTL, it was reasonable to request institutions to comply. Hence if there were still gaps in the implementation of OBTL, conditions were imposed and therefore, the percentage in conditions reached a maximum while the percentage in recommendations dropped. In 2012, most institutions have learnt to comply with the OBTL requirements and a significant drop in the percentage on conditions can be seen.

From 2012 to 2015, the percentage of conditions slightly increased in 2013 before it dropped in the following two years. We suspected that the increase in 2013 was due to accreditation exercises conducted for institutions with less experience. To distinguish experienced institutions from less experienced ones, we considered the number of programmes operated by them, and noted that a substantial number of institutions have at least 8 accredited programmes, while the rest has less than 8. Hence, we used this figure as the criterion for experienced institutions. Figure 4 shows the percentage of conditions for the experienced and all institutions. It can be noted that for the percentages of conditions in 2010 and 2014, the figures for experienced institutions were half of those for all institutions. However, the question of why there was an increase in 2013 remains unanswered. In fact, the increase was more obvious from the graph of experienced institutions.
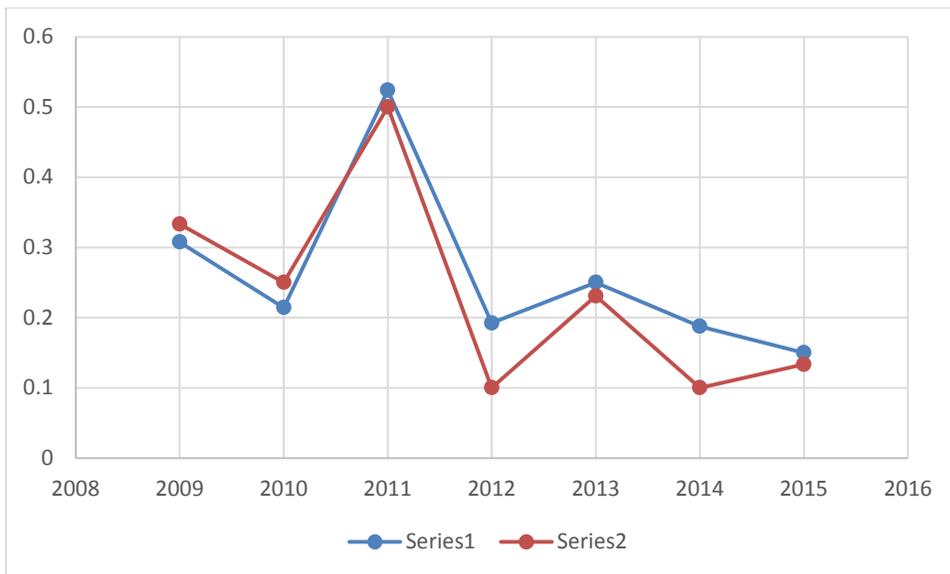

Figure 4. Percentage of reports that have OBTL-related conditions among all
institutions (Seies1) and among experienced institutions (Series2)

To understand the cause for the increase in 2013, the performance in OBTL implementation of each institution was reviewed. An institution was considered to have improved in OBTL implementation if the percentage of conditions after 2011 is lower than that on or before 2011. The performance results show that most of the institutions have improved. A closer look at the background of those which have not improved revealed that their institutions have undergone major structural changes over the years.

When those institutions were excluded from the analysis, the graph, shown in Figure 5, illustrates a clear decline in percentage of conditions starting from 2011, and the gap in OBTL requirements have reduced to zero since 2014.
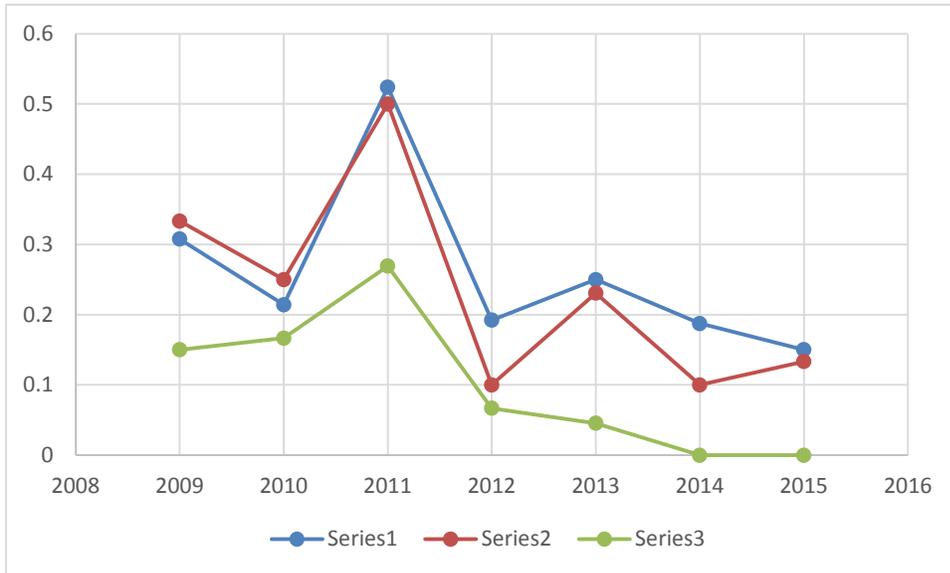

Figure 5. Percentage of reports that have OBTL-related conditions among all
institutions (Seies1), among experienced institutions (Series2), and among
those experienced institutions without major structural changes over the years (Series3)

5.2 Qualitative observations

The above analysis presents figures to reveal the amount of gaps in OBTL implementation found in accreditation exercises from 2009 to 2015. This gives an overall picture on the extent and progress of OBTL adopted by institutions. In this section, findings on the nature and issues associated with those gaps are presented to reveal more details in the progress of OBTL adoption.

A review on the conditions and recommendations presented in accreditation reports showed that they can be classified into four major categorizes. The first category concerns with the institutions' lack of a system or plan for OBTL implementation. The second concerns with staff training on OBTL. The third concerns with the clarity of presenting key OBTL elements such as programme objectives and outcome statements in general. The last category is about more specific issues on OBTL implementation, usually related to individual PILOs, CILOs, and alignments between specific learning outcomes and assessment tasks. The following list, in italics, excerpts from typical condition and recommendation statements under each category. (As accreditation reports are confidential documents, the statements listed below have been edited with some wordings rephrased and some sensitive words replaced or removed to protect confidentiality and preserve institutions' anonymity.)

(i) Lack of a system or plan for OBTL implementation

- *to develop an action plan in implementing a fully outcome-based programme*
- *to review the progress of the trial implementation and the steps taken to implement a fully outcome-based approach in the next accreditation.*
- *to set up a relevant mechanism to monitor and supervise the implementation of OBTL.*

(ii) Staff training on OBTL

- *to conduct more workshops on pedagogy specifically in outcome-based education.*
- *to support the trial implementation of outcome-based approach with appropriate staff training.*

(iii) Unclear programme objectives and outcome statements

- *to review and produce clear statements of well-defined and measurable learning outcomes of the programme and individual courses.*
- *to review and formulate in clearer terms the aims, objectives and learning outcomes of the programme.*
- *to refine the wordings in the programme objectives to reflect the curriculum.*
- *to revise the PILOs to ensure that they are specific, measurable and achievable, and there is alignment of the PILOs, graduate attributes, curriculum content and assessment strategies.*

(iv) Specific issues among individual PILOs and CILOs

- *to review and refine the scope of PILOs X and Y to enable more precise alignment between these PILOs and the CILOs of courses T, U and W.*
- *to refine the wordings of PILO X so that it clearly reflects the actual learning outcome the programme intends to achieve in regard to YYY.*
- *to refine PILO X so that it aims to achieve XXX instead of YYY.*
- *To fine-tune the POs and PILOs to make explicit the Programme's intention of equipping students with XXX.*
- *to review the CILOs of course XXX so that the stated outcomes better reflect the knowledge and skills expected of students.*
- *to review weightings of CILOs to ensure that they align with assessment methods and weightings.*
- *to articulate clearly in the intended learning outcomes of the relevant courses the competencies and skills of XXX required.*

- *to review the weighting and nature of different assessment components for courses offered in the junior years to better reflect the achievement of the CILOs*
- *to revise PILOs X, Y and Z and provide sample assessments that show how students can demonstrate that they have attained these PILOs.*
- *to revise the courses X and Y to ensure that the PILOs, CILOs, course contents and assessments are aligned.*

The review on the conditions and recommendations over the years also showed that those belonging to the first three categories were mostly found in earlier years, and those belonging to the last category were found more recently. From a QA perspective, an important step toward implementing OBTL is to have a system in place and to have the staff trained. Hence, it is not surprising that institutions were required or recommended to implement a system and train their staff for OBTL in the early years. As institutions progressed toward adopting OBTL, the accreditation process put more emphasis on the quality of OBTL implementation, such as how well the outcome statements are presented, and how good the alignments are between different components of the OBTL framework. This emphasis was reflected in those statements belonging to the third category.

The sample statements in the fourth category indicated a more mature stage in OBTL implementation. The OBTL terminologies were used in these statements to pinpoint specific issues identified from the learning programme. This indicated that institutions designed the programmes and presented the programme documents using an OBTL approach, and accreditation panels were also familiar with the OBTL approach and used the terminology of OBTL in making recommendations and setting conditions for approval.

6. Conclusion and discussion

HKCAAVQ has been effective in advocating the adoption of OBTL in the private sector through its training activities offered to stakeholders, the stipulation of the OBTL approach in its accreditation criteria, and the execution of accreditation exercises. The effectiveness is evident from results of the quantitative and qualitative analyses on the accreditation outcome which suggest that institutions have been gradually adopting OBTL since 2008, and have become more mature in recent years in incorporating OBTL in the design of their learning programmes. It is clear that most institutions have advanced from the early stage of OBTL implementation. Gaps in having a system for implementing OBTL have become less of an issue now. Many institutions are now able to provide evidence on using OBTL in their programme design and monitoring process. For instance, assessment and discussion on learning outcomes are usually found in the programme proposals, annual programme reports, and external examiner reports. The OBTL framework now provides a useful tool to pinpoint issues in curricula, to specify required rectifications, and to suggest improvements. We believe that the overall quality of

accredited programmes has improved as a result, and the OBTL framework is now one of the major tools HKCAAVQ used to assure the quality of learning programmes.

To take the outcome based approach to the next level, HKCAAVQ has recently refined its Guidelines on the approach to Learning Programme Re-accreditation. Institutions undergo this process are now expected to provide evidence to show that graduates of their programmes have actually attained the learning outcomes specified in their programme documents, and graduate destinations are commensurate with the stated programme objectives. In line with a recent government initiative, institutions are now also asked to include in their accreditation documents for Learning Programme Accreditation a graduate profile, a document that specifies, among others, the employment and education pathways of the graduates. This in effect encourages a student-centered approach whereby the graduates' education and employment outcomes will be taken into consideration when institutions develop new learning programmes. With a proliferation of degree level programmes in Hong Kong over the past decade, there is a growing concern in the community that there could be a mismatch between the education provided to students and the competency and skills that employers are looking for. This new measure on graduates' outcome is expected to contribute towards alleviating this potential problem.

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