



Government of Pakistan
Inter Board Committee Of Chairmen



Cambridge Assessment
International Education



Islamic Republic of Pakistan
اسلامی جمہوریہ پاکستان
Islāmī Jumhūrī-ye Pākistān



Equivalence of “O” & “A” Level with SSC & HSSC in Pakistan

STUDY VISIT REPORT

“Discussion on Educational Process & Equivalence”

Study Visit of Senior Staff/Recognition Team

Cambridge Assessment International Education, Cambridge, UK

(13 – 14 February 2018)

Sponsored by

Cambridge Assessment International Education

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ACKNOWLEDGMENT

With gratitude and great pleasure we would like to acknowledge Cambridge Assessment International Education (CAIE) for inviting us to Cambridge, UK and sponsoring the Study Visit “to discuss the educational process and equivalence for “O” and “A” Level offered by Cambridge with “SSC” and “HSSC” in Pakistan” and Inter Board Committee of Chairmen (IBCC), Islamabad, Pakistan for nomination in the program.

We are highly indebted to the Cambridge Assessment International Education for providing us an opportunity to visit Cambridge and especially the wonderful DC-10 operation facility of CAIE. On behalf of all the participants, I am highly thankful to Janet Morris, Director, International Network, CAIE, Val Sismey, Head of Recognitions, CAIE and Amanda Cator, Senior Recognitions Co-ordinator, CAIE for all support and facilitation towards the success of our visit to Cambridge.

I would like to appreciate the knowledge and experience shared by Anthony Dawson, Deputy Director, Assessment Standards Quality, CAIE and Jerry Papworth, Assistant Director, Operations, CAIE. The Assessment and Quality assurance system by CAIE, especially the DC-10, operation facility of CAIE is remarkable and very well managed.

In the end, I would like to extend my gratitude to Uzma Yousuf, Country Director, Pakistan Cambridge Assessment International Education for her coordination and all-support for our visit to Cambridge and making visit successful.

Dr Masroor Ahmed Shaikh
Chairman, SBTE, Karachi

1. Rationale

In Pakistan, there are number of British Assessment and Examination bodies operating and offering their qualifications. The Cambridge International Assessment Education (CIAE) is one of the leading and most popular UK examination body in the country, which offers General Certificate of Education (GCE) O-level and A-Level.

The O-level program is equated equivalent to SSC and A-level is equated equivalent to HSSC. The equivalences to O & A Level are determined and issued by Inter Board Committee of Chairmen (IBCC) as per agreed formulae developed in consultation with British Assessment Examination bodies including CIAE. The grade boundaries are being used by IBCC for equivalence of O & A level are given by CIAE. For equivalence 5 papers/subjects at O-Level and only 3 papers/subjects at A-level are considered as compared to 8 papers/subjects at SSC and 7 papers/subjects at HSSC. Further, CIAE award Percentile Uniform Marks (PUM) to their students, which is different from the actual (raw) score / marks obtained by a student. Whereas, Pakistani Boards of Education award actual/absolute score achieved by a student. However, still the local students taking O & A Level exams and their parents always raise issues on IBCC equivalence process and claim for discriminations. Recently, Senator Ayesha Raza Farooq by calling attention notice raised the similar issue of O & A level equivalence with SSC and HSSC in the Senate of Pakistan. The matter was place before the Equivalence Committee (EC) 151th meeting held on 22-23 Feb, 2017 at Karachi and it was decided to constitute a sub-committee to examine, discuss and formulate recommendations in the matter. Thus to discuss on equivalence of O & A level including update on research, grading, assessment and further to discuss on implementation of newly developed Numeric Grades by British Examination Bodies a visit of IBCC sub-committee was arranged by Cambridge International Assessment Education, Cambridge, UK.

2. Participants

To obtain the maximum benefits from the visit, the IBCC carefully selected following three participants those have relevant experience, expertise and are already members of the sub-committee constituted by IBCC to resolve the issue.

Name	Designation Address
1. Prof. Shaukat Ali	Chairman, IBCC
2. Mr. Hussain Ahmed Madni	Secretary, IBCC
3. Dr. Masroor Ahmed	Chairman, CCDTE and SBTE

3. Objectives of Study Visit

The visit program was designed to develop broader awareness about IBCC process for equivalence and conversion formulae for equivalence of O & A levels and to provide a deep knowledge about the Education, Grading and Quality assurance system of CIAE with the following main objectives:

- a) To develop awareness about IBCC equivalence process and conversion formulae for equivalence of O & A levels.
- b) To share the research conducted by IBCC and impact of O level score on A level's conversion.
- c) To study the CIAE Quality assurance process, Assessment and Numeric Grading system and its status of implementation by CIAE.

In two days' visit, the 1st day was utilized in presentations, briefings and in interactive discussions, whereas 2nd day we visited DC-10, a CIAE operational facility where question papers and scripts were handled, dispatched and stored.

4. Study Visit Program

4(a) 1st Day-Tuesday, 13th Feb 2018,

Briefing, Presentations and Sharing of Gifts/Mementos

On Tuesday the delegation visited CIAE, head quarter, where the IBCC delegate was welcomed by Janet Morris, the Director, International. After the introduction, Dr Masroor Ahmed, Chairman CCDTE/SBTE given presentation on equivalence process and conversion formulae for O & A level by IBCC. The sequential presentation included following slides/topics:

- ✓ The Inter Board Committee of Chairmen (IBCC)
- ✓ Equivalence of GCE 'O' & 'A' Levels, UK with 'SSC' & 'HSSC', Pakistan.
- ✓ Assessment/Exam Results Statistics:
 - a) *Comparison of SSC and O-Level,*
 - b) *Comparison of HSSC and A-Level.*
- ✓ Impact of O-Level on Equivalence of A-Level with HSSC,
- ✓ Proposed Equivalence Formula for GCE A-Level,
- ✓ *Numeric Grading (9-1) to Letter Grade (A*-E)*

After the above refer presentation (**Annex-A**) on IBCB role and its equivalence process in Pakistan, Dr. Anthony Dawson, Deputy Director, Assessment Standards and Quality given presentation on CIAE process for “*Grading and Assessment*” (**Annex-B**), which is then followed by presentation on “Cambridge Quality Assurance Process” (**Annex-C**) from Mr. Jerry Papworth, Assistant Director Operations, CIAE, UK.



4(b) 2nd Day-Wednesday, 14th Feb 2018,
Visit of DC-10, The Operational Facility of CIAE

CIAE works with more than 10,000 schools in nearly 160 countries across 9 regions including North America, Latin America, UK & Ireland, Europe, Sub-Saharan Africa, Middle East & North Africa, South Asia, East Asia and Southeast Asia & Pacific.

On second day we visited DC-10 an operational facility of CIAE, from where two years before planning and operation for conduct of Cambridge exams have been done. For each exam, question papers and scripts containing barcodes were prepared before two years of conduct of exams and stored in DC-10, from where all the scripts and question papers were dispatched to the exam centers worldwide as per schedule. After conduct of exams the scripts and papers were return back to DC-10 and the same were forwarded to assessors for e-marking. The huge storage facility at DC-10 is equipped with electronic sorting and packing conveyor belts, fast speed scanning machine for e-marking and OMR.



5. Findings and Comparison of Two Systems

The visit enhanced our knowledge and understanding about the role of different Examination Bodies in British Education system. Further, for the IBCC delegate, visit provided an opportunity to compare Cambridge Assessment Education system with Examination and Assessment practices by the Educational Boards in Pakistan. The comparison of O and A level UK system with SSC and HSSC Pakistani system is presented as follows:

S#	Component	Cambridge / UK (O & A Levels)	Pakistani (SSC & HSSC)
01	Research, Planning and Policy and Curriculum	Examination Assessment Body	Federal Government
02	Intake level	8 years of schooling for O-Level	8 years of schooling for SSC
03	Minimum Age at the time of entry	14 years for O-Level	14 years for SSC
04	Duration of Program	2 years	2 years
05	Conduct of Examinations	½ year (6 Months)	1 years
06	Number of Academic Sessions	Four	Two
07	Duration of Each Academic Session	16 Weeks	32 Weeks
08	Selection and No. of Paper in Each Session	Candidate could select 02 to 03 papers among the 40 available subjects	08 in SSC, 07 in HSSC, Only Group selection is allowed in the start.
09	System Flexibility	High	Limited to Group Selection
10	For Completion total number of Paper / Subjects required.	05(Ext) and 08(Int.) at O-Level and 03 at A-Level	08 at SSC and 07 at HSSC
11	Grading / Scoring	Letter Grades / Raw Score Converted into Percentile Score	Letter Grades / Raw Score
12	Preparation for exams	May attend Regular School or do preparation at Accredited Centre	Must attend Regular School
13	Assessment Type	Centralized Assessment containing Conceptual Questions of Higher Order learning	Regional Assessment containing mainly Rote Memory type Question
14	No. of Higher Grade Achiever / Dropouts	More no. of Higher Grade Achiever / Fewer Dropouts	Fewer no. Higher Grade Achiever / More Dropouts
15	Cost of Program	High (affordable to Higher Class Community)	Low – High (affordable for all)

6. Issues & Discussion on Equivalence

6(a) Cap at 90% and Inflation of Grades

There is an ongoing debate on the IBCC's Equivalence Formula that a cap of 90% is placed for O & A-Level candidates while conversion for SSC and HSSC respectively. The candidate having Cambridge qualifications and their parents think that the cap of 90% in the formula is restricting and limiting the chances of O & A-level candidates for admissions into Engineering and Medical professions. The issue of Cap at 90% in the IBCC' Equivalence Formula is highlighted further in year 2010 when A* above A Grade was introduced in the Cambridge System. However, on the above issue of Cap at 90%, the IBCC is of the view that:

- (a) Cambridge award Grades on the basis of Unified Marking System (UMS), which is different than the raw score obtained by a candidate. Whereas in Pakistani System Grades are awarded on the basis of actual and absolute marks scored by a candidate.
- (b) In Cambridge System majority of Pakistani candidates are high/global achievers. and every year more than half of candidates secure five A* to C grades. In 2017 nearly 10-13% candidates in 'O-level' and 6-9% candidates in 'A-level' obtained A*-A Grades. Further, in the past every year inflation/rise in number of high achievers was observed in Cambridge System.
- (c) In Pakistani System hardly 3-5% candidates obtained 90% and above marks in SSC and HSSC exam 2017, majority of candidates remained between 50-70% and a good number of candidates obtained marks within 40-60%.

6(b) Impact of Grades in O-Level on Equivalence for A-Level

However, IBCC being considerate highlighted the real issue in the IBCC Formula, which is mainly affecting majority of candidates in Cambridge system while conversion/equivalence for A-level, especially the candidates those obtained lower Grades in O-level and higher Grades in A-level are very badly affected at the time of conversion for A-level, as in calculation for equivalence/conversion for A-level, marks obtained by a candidate in O-level are also added into A-level score, thus O-level score greatly influences overall conversion score.

The study of two illustrated cases for equivalence, where in *Case-A* a candidate obtained Higher A-Grades in all eight subjects at 'O-level' with equated marks for SSC ($90 \times 8 = 720$)

and Lower Grades “E” in all the three subjects at ‘A-level’ with equated marks for HSSC (45x3=135), as per current practice and IBCC Equivalence Formula the candidate in Case-A will receive Equivalent % marks for HSSC as follows **855/1100(77.27%)**. Whereas in Case-B a candidate received lower E-Grades in all eight subjects at “O-level’ with equated marks for SSC (45x8=360) and Higher A-Grades in all three subjects at ‘A-level’ with equated marks for HSSC (90x3=270), as per IBCC Equivalence Formula the candidate in Case-B will received Equivalent % marks for HSSC as follows **630/1100(57.27%)**. The above example shows that in both the Cases A&B O-level marks are dominating the calculation for A-level Equivalence.

Proposal for Revision in Equivalence Formula for A-Level Conversion

In discussion thus it was proposed by IBCC that Equivalence Formula for A-level may requires following modifications to reduce the influence of O-level marks on equivalence for A-level.

$$\mathbf{((30\% \text{ of [Equivalent O-Level Score]} + 70\% \text{ [Equivalent A-Level Score]}) / (1100)) \times 100 = \text{HSSC Equivalent Marks}}$$

The above proposed formula for equivalence will illuminate the influence of O-level score on conversion/calculation for equivalence of A-level with HSSC. However, the candidates from Cambridge system will be continue able to avail benefit of 10-20% weightage count of O-level score for admission into any graduate Engineering and Medical program.

6(c) Implementation of Numeric Grades

In England GCSE is reforming and exam boards are gradually switching form old Letter grade (A*-G) scheme to Numeric grade (9-1) scheme from Academic Year 2017 onward. IBCC in its 151st meeting of Equivalence Committee (EC) held on 22-23 February, 2017 at Karachi considered the issue and constituted a Sub-Committee headed by the Chairman, BISE, Hyderabad to deliberate on need for change in IBCC equivalence formula.

The above sub-committee proposed that implementation of Numeric (9-1) grading in UK is in transition phase and gradually numeric grading scheme is implemented on individual subjects and by this year (2018) out of forty, twenty subject will have Numeric grading. Thus at this stage any change in IBCC Equivalence process would cause great confusion in IBCC staff and Students. It is therefore, proposed that IBCC shall revisit existing

equivalence Formula and process once the new grading system is fully implemented by the British Examination Bodies.

The study visit was organized in the light of a meeting held between IBCC and Cambridge from 22-23 April, 2015, where it was unanimously agreed that before bringing change/improvement in equivalence both Pakistani and Cambridge systems shall be carefully reviewed by undertaking research on following lines:

- a. Project inception for reviewing the equivalence system
- b. What is in the scope of the study
- c. Revalidating/ refreshment of benchmarking
- d. The effects of raising or removing the 90-mark cap
- e. The consequences of O Level and A Level weighting and proposed changes on taught and candidate outcomes.

7. Recommendations & Future Collaborations

After the presentations and discussion on the issues presented at para-6 above for future collaborations following joint recommendations have been made:

- a) Revisiting or Bringing change in IBCC Equivalence Formula required a detail **Research** and understanding of numeric grade.
- b) **Capacity Building** of Teachers in developing questions paper especially developing Higher Order, Application, Analysis and Creativity type questions and capacity building of staff in Educational Boards for Quality assurance in conduct of examination.
- c) A *grand Seminar* for developing for developing broader awareness on Numeric Grades and consensus on review or change in Equivalence Formulae may be conduct

8. Conclusion

The study tour provided us in-depth knowledge about the Cambridge Education System. Generally, our understanding about the different assessment bodies operating in UK has been extended and consolidated. Especially, the visits of DC-10 (a huge script/question paper storage and handling place) was quite informative, which provided us practical experience about different tools used by Cambridge Examination System in e-making, handling and distribution of scripts/question paper worldwide.

The briefing / presentations on Cambridge system and visit of DC-10 provided us relevant and important information about the Cambridge Education system and about its Quality assurance process, which provided a way forward for bringing reforms and quality assurance in the examination and assessment system of Pakistan.

Thus it is recommended that examination and assessment system in Pakistan shall be improved by bringing reforms in the examination system that may include:

- a) Changing pattern of question paper by replacing rote memory type questions with higher learning order questions involving thinking.
- b) The IBCC may developed a similar Centralized questions paper bank / storage facility feeding all Boards of Education in Pakistan on the format of DC-10.
- c) IBCC create/arrange funding for providing facilities / equipment for e-marking and OMR/OCR testing, capacity building for all Boards of Education in Pakistan.

9. Study Tour Evaluation

COMMENTS AND SUGGESTIONS FOR FURTHER IMPROVEMENT

Components / Areas	General Comments
Activities	Relevant to the title, informative, gave new insights.
Quality of Brief	- Excellent, meet the objectives of the tour. - Resource Persons were very informative and well supportive.
Duration of Visit	Suitable and sufficient.
Administrative Support	Every one of the staff members was very cooperative.
Other Activities	Provided opportunities to see the historical places, the excursion visit of Cambridge and historical places was very informative.
Air Travel	Comfortable
Tour Schedule	Perfect and Observed accordingly
Hotel Accommodation	Hotel was good and located at central place
Others	Discussed and shared views and experience in detail.

Overall Rating of the Study Tour

Fair

Good

Very Good

Excellent

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**Participants of the Study Visit – Cambridge International Assessment Education
(13th to 14th February, 2018)**