



An approach to comparative evidence from other jurisdictions

Summary

- Cambridge Assessment believes that it is beneficial to study the education systems of other jurisdictions in order to evaluate alternate approaches, and to explore innovative ideas.
- Cambridge Assessment feels that open-mindedness and willingness to learn lessons from other jurisdictions' experiences may benefit the UK in the long term.
- However, it is important to temper enthusiasm for alternative systems' successes with a realistic appraisal of the similarities and differences of their system; their culture and the dynamics at play in their schools.
- Cambridge Assessment has found that a layered approach to mapping exercises incorporating system-level, curriculum-level and assessment-level information provides subject experts with effective tools to inform their thinking with information about other jurisdictions.
- Mapping exercises carried out in three subjects (English, mathematics and science) by Cambridge Assessment have enabled subject experts' thinking about GCSE development to be informed by educational practices in selected jurisdictions worldwide.
- More than twenty jurisdictions were explored during the mapping exercises across the three subjects.
- Whilst mapping exercises are informative, users must be mindful of their limitations. (Although this is a caveat which also applies to most comparative studies, and relates to the nature of comparability, and not the effectiveness of a mapping approach.)

Overall approach

Cambridge Assessment's view is that there is much that can be gleaned from studying other jurisdictions' approaches to education. However, comparisons with other jurisdictions must be undertaken in a pragmatic and systematic way.

The limitations of a comparative approach to educational policies and practices

It would be dangerous to embark upon a comparative approach, without a clear vision of the limitations involved.

- Plauditing elements of alternate systems without a clear view of how those elements sit within the context of that system is unlikely to prove fruitful. Imposing unsuitable elements into our system is unlikely to be successful in the long term, which in turn has cost implications and would serve to further undermine public confidence.
For example, it might be the case that a very successful jurisdiction sets challenging compulsory examinations at age 15 and students perform well on them, but do so within the context of streaming candidates from an extremely young age and investing very heavily in support for the lower-performing students. To adopt the immediate finding which pertains to the age group of students we are most interested in (challenging examinations at age 15) without pairing it with the information about the approach followed at an earlier stage would be mistaken.
- Misleading information can emerge if a structured approach to comparison is not followed. Cause and effect can be readily confused.
For example, one could attribute success to a particular element of the system common to high-performing jurisdictions. However, if that same element is also present within the systems of low-performing jurisdictions it cannot be the sole cause for success, even though it is seen in all the highest performers.
- It is not always possible to source all information; public websites may not contain the answers to all the questions, and if you contact individuals you cannot always be sure that they are the people best placed to answer the query (even if they themselves think that they are). The intended (and documented) curriculum may be considerably different from the enacted curriculum. By its very nature omitted information can dramatically skew the picture one receives and one's interpretation of that picture.
For example, researchers working from publically available documents on the web, or even visiting the jurisdiction in question, are unlikely to see the full picture of education in that jurisdiction. Less successful schools or elements of the system are not likely to be shown off in public, by either high or low performing jurisdictions.

Re-appraising 'success' and 'high-performing'

Critical to Cambridge Assessment's approach to comparability across jurisdictions is a pragmatic approach to these value-laden terms. 'High-performing jurisdictions' is a phrase now in fairly common parlance, thanks partly to the developing longitudinal strength of the major international comparisons such as PISA and TIMSS and partly because of the current political interest in such indicators. It is also a phrase synonymous (and rightly so) with 'success'. Nevertheless, simply following a 'grass is greener elsewhere' approach and chasing after the policies and practices of the high-performing jurisdictions is short-sighted for a number of reasons:

- Some jurisdictions' educational approach in particular subjects is much more closely tailored to the approach used in the international studies – as a result their students are more familiar with the style of assessments required. In consequence their comparative success may be something of a misnomer.
- There is a time lag in the findings of major international studies. Success in such studies is most likely related to policies and practices which occurred some years before the studies were conducted, and even further before the results were made available.

- Most jurisdictions' policies are in some state of evolution or flux most of the time, and few jurisdictions, however successful, are content with their performance. Thus, 'catching' the policies and practices which contribute to the success is like catching fireflies.
- Educational policies and practice do not exist in isolation. There is a whole web of inter-related circumstances which contribute to the success (or otherwise) of any educational policy – overall culture, parental expectations, dynamics within and outside schools, teen and youth culture, attitudes to teaching and learning, economic performance of the country with its concomitant effect upon disposable income, family attitudes and motivation.

However, if a more open-minded approach is brought to bear, where ranked position in international comparative studies is only a part of the picture, and deeper insights are sought into the reasons why particular strategies succeed in certain places, then valuable intelligence can be developed. This approach includes:

- Tracing the full picture about alternative or innovative approaches – where they are used, how they are used, upon what other elements of the system they are interdependent. Are such approaches directly linked to success, or are there confounding factors?
- Cross-referencing between different jurisdictions – if the same policy is followed, is it accompanied by similar practice in other aspects of the educational system? How does it work here, but not there?
- Including lower performing jurisdictions in some comparisons. Whilst they may be less successful in the overall picture, there may be innovative and creative solutions within their systems. Additionally it can be easy to attribute the success of high-performing jurisdictions to common elements of their systems – but these may equally occur in lower-performing jurisdictions as well. If the lower performing jurisdictions are ignored, this will simply not emerge.

'Jurisdiction' can even, on occasion, be stretched to encompass a previous era of the English curriculum.

With these factors in mind, Cambridge Assessment carried out a series of mapping exercises, organised in 'layers' in three subjects. Mapping exercises are not unique to Cambridge Assessment, nor are they a new approach. The Department for Education (DfE 2012) and the Nuffield Foundation (Hodgen, Marks and Pepper, 2013) both recently used the approach. However, Cambridge Assessment has introduced a layered approach to the process, which has brought a number of benefits.

The Cambridge assessment approach to comparative mapping of other jurisdictions

A mapping exercise was completed at each of three levels:

Each layer concentrated upon a different level of the educational system:

- System-level layer
- Curriculum-level layer
- Assessment-level layer

Dealing with the multiple facets presented by the different levels of the education system as layers saved having to address them as dimensions (of the same spread sheet), which would have been more complex and probably less informative. The layered approach fitted with the broadly hierarchical nature of the systemic features addressed.

Completion of the mapping documents was achieved via a systematic search of the following sources of information:

- Known research papers – previous mapping exercises
- Reliable international databases of information - INCA, NCEE, etc.

- Ministry websites
- Examinations agencies' websites
- Other researchers' work
- Other relevant reliable sources

A separate spread sheet was completed for each subject, and for each layer. In order to complete the assessment level spread sheet effectively for non-anglophone countries, professional translations of some materials were obtained. The three layers of spread sheets did not necessarily contain exactly the same jurisdictions; in general the system-level spread sheet contained most jurisdictions, with the curriculum-level spread sheet containing a subset of jurisdictions. The exact jurisdictions covered differed for each subject. In total, across all three subjects twenty two different jurisdictions were investigated: Alberta, Australia (NSW), Australia (Victoria), Australia (core), Belgium, Canada (Alberta), China (Shanghai), England, Estonia, Finland, Hong Kong, Hungary, Japan, Korea, Malta, The Netherlands, New Zealand, Norway, Poland, Singapore, USA (core) and USA (Massachusetts). However, no spread sheet contained all jurisdictions. The assessment-level spread sheets were the same for each subject and covered GCSE, IGCSE, Singapore and Hong Kong assessments. In some cases jurisdiction either had a curriculum at national level or a curriculum at assessment level (which acted as the national curriculum). Other jurisdictions have both. Jurisdictions were contained within columns of the spread sheet, and each row of the spread sheet contained a particular issue or piece of content.

The finished mapping exercises themselves are a tool, rather than a 'result' per se, which were then used by subject experts to inform their thinking. The spread sheets can become very large, but remain easily useable, as users tend to home in on a particular topic or jurisdiction and then broaden their use of the spread sheet horizontally (other jurisdictions' approaches to the same issue or content) or vertically (contextualisation of the issue or content within the jurisdiction of origin). In order to keep the size of the spread sheets down, often a short summary was provided, plus a web link to the original, more detailed source of information. This had the additional advantage of ensuring that the subject experts had ready access to relevant primary source material.

Where the spread sheets are not too large, it is possible to carry out a further exercise, summarising the findings at the end of each row and column. This allows a picture to emerge of the range of policy and practice in existence, relating to each of the issues investigated (from the rows) and an overall picture of each jurisdiction (from the columns). This was carried out for the system-level spread sheet in one subject, where the number of jurisdictions investigated was relatively small.

A further research exercise investigated societal and cultural factors in more detail in a sub-set of jurisdictions. Whilst this could have taken the form of a fourth mapping exercise, it was decided that a narrative approach would be more effective, and this has been reported separately.

Using the mapping exercises

The mapping exercises were used by subject specialist experts to inform their research into approaches to curriculum and assessment that might be explored for use in the UK. Having all three mapping exercises completed enabled the experts to:

- Cross reference information about specific topics within assessments in different jurisdictions with the relevant details about the wider curriculum for those jurisdictions.
- Set evidence about assessment structure and approach into the context of the wider education system.
- Clearly see where educational aspiration/success was supported by practice elsewhere in the system – such as streaming, teacher training or textbooks.

- Identify innovative content within the assessment curriculum or the wider curriculum, or identify innovative assessment approaches.

The results from using the mapping exercises are separately contained within the subject experts' findings. One of the strengths of the mapping exercises as a tool was the way in which the experts were able to dip in and out of them, when looking for information related to different topics. As a result (and this is a strength) the evidence from the mapping exercises tends to be embedded deeply within the experts' thinking upon particular topics, rather than contained within an overarching 'this is what we found when we looked at other jurisdictions' report.

The strengths of the mapping exercises

- Mapping per se enables an overview of different jurisdictions with relative efficiency.
- The three layers of mapping provide an effective way of examining the whole system.
- The mapping exercises could be extended ad infinitum when required. Extra jurisdictions were added into two of the studies.
- The mapping exercises can (and should) be updated periodically, otherwise they will become outdated. However, previous versions should be kept, as a snapshot of the time in question.
- Mapping exercises can be completed for additional subjects as required, in some cases utilising information and web links already sourced for other subjects. Cambridge Assessment will be commencing work in history and geography soon.

Conclusions

Creating the mapping documents was both challenging and time-consuming, but proved well worth the investment. The three 'layers' of spread sheets worked very well to fulfil their intended purpose and subject experts found the documents user-friendly and relevant to their needs.

From a practical point of view, it was useful that each of the three layers could be completed simultaneously, because this saved time in very time-pressurised circumstances.

Generally the spread sheets were used electronically, although some users attempted to print copies to use as wall charts – this was relatively successful, although multiple sheets needed to be taped together. It is possible that a professional reprographics service might have been able to produce a sufficiently large sheet of laminated paper (combined with a small font) to produce professional quality wall charts, and this will be investigated for the future. As it was, there was insufficient time available to enable this to be pursued.

References

DfE (2012) Review of the National Curriculum in England: What can we learn from the English, mathematics and science curricula of high- performing jurisdictions? Research Report DFE-RR178.

Hodgen, J., Marks, R. & Pepper, D. (2013) Towards universal participation in post-16 mathematics: lessons from high-performing countries. www.nuffieldfoundation.org.