Response to Education Bureau's Consultation Document on the Third Strategy on Information Technology in Education

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Acknowledgments

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Notes

In this paper,

- "the Document" means the consultation document on the *Third Strategy on Information Technology in Education* published by the Education Bureau in October, 2007;
- "the Committee" means the Steering Committee on Strategic Development of IT in Education which we understand to be the official author of the Document;

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1   Preamble

    1.1   We are fully aware that because of the need to keep the Document reasonably short, it is not possible for the Committee to report all the options considered, or all the deliberations which took place, or the full logic / rationale which led to the final choices presented. Consequently, some of the observations/issues we raise may have already been thoroughly deliberated by the Committee. Nevertheless, we would still prefer to provide to the Committee all the observations/issues which we can think of, just in case these points had not yet been covered.

    1.2   Because of the rather short consultation period, we are only able to respond to selected points in the Document. Our submission is thus neither thorough nor comprehensive. However, we are prepared to engage in follow-up dialogues with the Committee if the latter considers this useful.

    1.3   We feel that we do not have as much background information of government intentions /commitments, nor as much access to technical expertise as the Committee. We therefore will not attempt to suggest answers/solutions in our submission --- instead, we shall focus on raising questions and alerting the Committee to possible areas of concern.

2   On Action 1 – Provision of a depository of curriculum-based teaching modules with appropriate digital resources

    2.1   Conceptual issue – centralized vs distributed depository(ies) of resources.

        2.1.1   We get from the Document an impression that the Committee believes in the use of a centralized depository for teacher resources. However, we are also aware that there exists too an apparently opposite view in the IT field that the future lies in distributed depositories rather than centralised ones.

        2.1.2   We do not favour one approach over the other. We just wonder whether the Committee has considered both, and whether support / resources have been planned to support both. If, in its wisdom, the Committee has made an informed decision on a choice between the two approaches, we are sure education institutions and practitioners will appreciate a sharing of this wisdom by the Committee.

    2.2   Development and maintenance issues

        2.2.1   We have the impression that the intention (or at least a perceived "solution") is to significantly extend / expand what HKEdCity has been doing. We are

concerned that the current manpower and expertise of HKEdCity does not have the capacity to handle the envisaged project. At present, the existing staff is not yet able to fully keep track of updates (e.g., relocated websites and broken links). There seems to be a definite need to significantly expand its professional/technical staff.

2.2.2   Of course it is possible (in fact absolutely necessary) to seek the support of practicing personnel in the field of education – from basic schooling to tertiary education. Without their contributions, the depository will not have sufficient resources to be useful/successful. However, rewards and/or other incentives may be needed to encourage contributions to the depository. There is also the need to have a team of experts (as well as explicit and clear procedures/protocol) to screen such contributions, categorising, labeling / tagging / providing key words, etc. There may also be the need to develop specialized search protocols / engines.

2.2.3   For easy exchange of resources, there is a need to ensure compatibility across computing platforms. Since the majority of deposited items must be in Chinese (if we compare the number of CMI schools against EMI ones), we note with concern that, up to now, there seems to be still no full agreement on the coding used for Chinese characters --- not even within HK government, and probably not even within the HKEdCity (e.g., the use of Big 5 / HKSCS / UTF-8). This has led to unnecessary loss of time and/or interest (and occasionally led to frustration too). We believe there is a need to agree upon the code page(s) to be used, and ultimately, to have unified coding to handle all non-ascii characters (i.e., including traditional Chinese, simplified Chinese, Japanese, Korean, special symbols etc.)

2.2.4   We are also concerned about the software which the deposited items will run on. We can see a danger of favouring particular commercial software providers, either intentionally or unknowingly. We feel that the Committee may find it appropriate to disclose to the public its stand point concerning the use (or otherwise) of open source software.

2.2.5   We note that the building and maintaining of the kind of depositories envisaged require substantial and long term commitments. We have yet to see explicit budget proposals indicative of such a commitment. It is not clear what task magnitude is envisaged by the Committee. How much money does the Committee expect (or intend to request) government to invest into this massive task?

2.3   Intellectual property issues

2.3.1   If contributions are to be sought from practitioners in the field, the Committee might wish to clearly state its position concerning intellectual property rights of the materials contributed by these practitioners.

2.3.2   It may also be necessary to spell out clearly the conditions under which resources developed / enhanced by the staff of the depository may be used.

2.4   Accessibility issues

2.4.1   If the envisaged depository is to fully realize its usefulness, there is some need to improve the accessibility of items therein.

2.4.2   We believe that the current user interface(s) available from sites such as HKEdCity still needs improvement.

2.4.3   We trust that the Committee has already worked out how to (a) make teacher-users aware of the existence of appropriate resources, and (b) ensure that teacher-users are proficient in the use of those resources.

2.5   Language issues
    2.5.1   We anticipate that there will be a need to provide many more teaching resource items in Chinese, especially to meet the needs of CMI schools and the NSS curriculum.
    2.5.2   We are also concerned, as practitioners in the field of basic education, because the increasing use of IT by children seems to parallel with the increasing "pollution" of the language used --- be it Chinese or English. We see that a centralized depository has, as one of its many responsibilities/ functions, a "gate-keeping" role. It is possible (and indeed necessary) for the depository to ensure high language quality of the items therein. But who can/ should be given the task of checking and/or improving the language?

3   On Action 2 – Sharpening of teachers' IT pedagogical skills

3.1   Identification of such skills
    3.1.1   We understand that the Committee is not referring here to IT skills (though competence in handling Blogs, Wikis etc. will become increasingly necessary), but to pedagogical skills which involve appropriate use of IT.
    3.1.2   We believe that teachers need to have more thorough understanding of students' cognitive processes, especially those related to the processing of multi-media messages delivered via ICT systems. Teachers will also need to know how to match pedagogy to such processes.

3.2   Providing / enhancing such skills in teachers
    3.2.1   In the effort to "sharpen teachers' skills", we see specific needs to ensure that teachers are proficient in
        3.2.1.1.   the approaches, strategies and techniques for teaching students to evaluate information they find from web (or other) sources;
        3.2.1.2.   responding to student questions which the teacher does not know the answer(s) to, and guiding such students to find answers with the help of ICT systems and resources.
    3.2.2   The need for "sharpening" naturally leads to continued professional development (CPD) efforts. In the past, institutions of tertiary education are often given the responsibility to provide CPD programmes. We feel that the Committee find it beneficial to look carefully into existing practice to ensure that whoever is charged with the CPD responsibilities can deliver quality programmes.

3.3   The Document made reference to "Web 2.0 applications". In view of the stunningly rapid development of ICT concepts and applications, we believe that the Committee might wish to look beyond Web 2.0, i.e., to also take heed of "Web 3.0".

4   On Action 3 – Assisting schools to draw up and implement school-based IT-in-education development plans

4.1   We concur with the observation that many schools lack overall, comprehensive and carefully thought out long term ICT development plans. However, in urging such schools to draw up and implement ICT development plans, the Committee may want to be careful not to end up with demands for unnecessary paper work.

4.2   We also see that there are very significant differences between schools in respect of their current stage of development in the use of ICT. We welcome the Committee's proposal to provide assistance to schools to draw up and implement school-based ICT-in-education plans. However, we stress the need to treat each case differently.

4.3   Again, we expect that the Committee will wish to involve institutions of tertiary education and perhaps even vendors. We see both the benefits and the potential problems which might ensue.

5   On Action 4 – Enabling schools to maintain effective IT facilities

5.1   It will be useful if the Committee can provide us with data on typical costs for maintaining and keeping ICT facilities effective and up-to-date (say, as \$X per \$100 of hardware). Such data can be compared with amounts the Committee intends to propose for maintaining facilities in our schools.

5.2   We note that maintenance is not just a matter of hardware/software repairs, enhancements and replacements. All of that has to be done by qualified personnel which must also be school-based. (Please see the following paragraph).

6   On Action 5 – Strengthening of technical support to schools and teachers

6.1   We have seen different approaches/modes of technical support used in different schools. We have come to the conclusion that any approach which relies solely on bought services from an off-set service provider does not work well. There is a need to have full-time, site-based technical support. This is increasingly necessary as the amount of ICT facilities in a school increases.

6.2   Some schools have been using various funds to employ contract staff to provide technical support to their schools and teachers. While this approach has many merits, schools find it increasingly more difficult to recruit and/or retain such support personnel. We believe the main reasons are as follows :

6.2.1   Schools typically cannot compete with the commercial sector in terms of salaries and fringe benefits.

6.2.2   A typical school can only afford to employ a very small number of support personnel. There is thus no (or very limited) promotion prospect. The lack of career advancement opportunities amplifies the recruitment and retention problems.

6.2.3   The fact that there are only a small support staff in a school means that members have very few colleagues to interact with. They feel that they do not have sufficient opportunities to grow professionally while they are employed in the school.

6.3   We believe that the difficulties may be addressed (at least partially) if a school can include ICT Technician in the permanent establishment (just like Laboratory Technicians). We further believe that one way of doing this is to increase the current "entitlement" of a school for technicians, and to broaden their duties to include ICT support.

6.4   Although we suspect that the Committee is probably already fully aware of it, we still wish to stress that it is not sensible to expect designated full-time teachers in the school to provide ICT technical support to colleagues and to the school as a whole.

7   On Action 6 – Raising parents' information literacy and assisting them to guide children in the use of IT at home

7.1   We agree that it will be beneficial (and even essential) for the community to raise ICT literacy of its parents. In this respect, we wish to stress that "literacy" must cover not only knowledge/skills but also attitude changes. There is also a specific need to address common problems (such as indiscriminate pursuit of cutting edge hardware, lack of awareness or positive regard for open source software).

7.2 Recently reported surveys, both locally and overseas, have pointed to the problem of over-indulgence of youths in IT activities. We would like to see the Committee spend time on this issue, and to propose ways of helping parents tackle such addictive behaviour exhibited by their children.

7.3 We are concerned that there may not be enough personnel with the appropriate training/expertise in our community to provide this component of parent education. It would be re-assuring if the Committee is able to provide estimates of manpower needs, and, if proved necessary, the strategies for training the trainers.

8 On related threats

8.1 We feel that the Document has not sufficiently addressed the many ethical, moral, psychological, social and societal issues which are heightened by the rapidly increasing use of ICT. We also note that there appears to be insufficient research on this.

8.2 Amongst the many issues referred to above, one that we are particularly concerned about is the apparently increasing trend for youths (and even adults) to stay in some virtual world. We feel that a comprehensive ICT strategy for the next step forward should include efforts to re-emphasize / re-discover overall values of education, and to provide meaningful real-life experiences. In other words, further development in ICT cannot (and should not) take place in isolation or at the expense of the overall development of education.

9 On the question of "the digital divide"

9.1 We feel that the Document has not given sufficient space to the issue of the "digital divide". It is not clear from the Document whether the Committee believes that this is not an issue in Hong Kong, or that the issue has already been properly dealt with.

9.2 In this connection, we would like to mention again the use of open source software which should help to reduce the financial burden of needy families.

10 On the question of previous "achievements"

10.1 The Document reported (in Annex A) government's progress in implementing initiatives of the Second Strategy on IT in Education. However, many of the items only reported on the number of events held, or the number of attendees of these events. But there seems to be a lack of information on the results, reviews or follow-ups on such events.

10.2 In particular, we would like to know whether any such events had brought about a significant impact on the academic achievement of our students.