Appendix

Table 1 ．Computer & Information Literacy Framework

|  |  |  |
| --- | --- | --- |
| Strand & aspect of CIL | Descriptions | % towards overall CIL score |
| Strand 1: Collecting and managing information |
| 1.1 | Knowing about and understanding computer use | Refers to the declarative and procedural knowledge of a person about generic characteristics and functions of computer. | 13% |
| 1.2 | Accessing and evaluating information | Refers to student’s capacity to carry out investigative processes to find, retrieve, and make judgments about the relevance, integrity, and usefulness of computer-based information | 17% |
| 1.3 | Managing information | Refers to student’s capacity to work with computer based information, for example adopt and adapt information classification and organization schemes in order to afford efficient usage. | 6% |
| Strand 1 sub-total | 36% |
| Strand 2: Producing and exchanging information |
| 2.1 | Transforming information | * 1. Refers to student’s ability to use computers to purposefully transform and clearly transmit information to specific audiences
 | 20% |
| 2.2 | Creating information | Refers to student’s ability to use computers to design and generate information products that afford further generation of new understanding among specific audiences | 22% |
| 2.3 | Sharing information | Refers to student’s understanding of how computers are and ability to use it to communicate and exchange information with others | 10% |
| 2.4 | Using information safely and securely | Refers to student’s understanding of the legal and ethical issues of computer-based communication from the perspectives of both information producer and consumer | 12% |
| Strand 2 sub-total | **64%** |

Table 2. Description of CIL proficiency Levels

| Proficiency Level | CIL score points | Behavior related to Strand 1:Collecting and managing information | Behavior related to Strand 2:Producing and exchanging information |
| --- | --- | --- | --- |
| Level 4 | > 661 | Students working at level 4 select the most relevant information to use for communicative purposes. They evaluate usefulness of information based on criteria associated with need and evaluate the reliability of information based on its content and probable origin. | These students create information products that demonstrate a consideration of audience and communicative purpose. They also use appropriate software features to restructure and present information in a manner that is consistent with presentation conventions and adapt that information to suit the needs of an audience. Students working Level 4 demonstrate awareness of problems that can arise regarding the use of proprietary information on the internet. |
| Level 3 | 576 - 660 | Students working at Level 3 demonstrate the capacity to work independently when using computers as information gathering and management tools. These students select the most appropriate information source to meet a specified purpose, retrieve information from given electronic sources to answer concrete questions and follow instructions to use conventionally recognized software commands to edit, add content to and reformat information products. | They recognize that the credibility of web-based information can be influenced by the identity, expertise and motives of the creators of the information. |
| Level 2 | 492 - 575 | Students working at Level 2 use computers to complete basic and explicit information gathering and management tasks. They locate explicit information from within given electronic sources. | These students make basic edits, and add content, to existing information products in response to specific instructions. They create simple information products that show consistency of design and adherence to layout conventions. Students working at Level 2 demonstrate awareness of mechanisms for protecting personal information and some consequences of public access to personal information. |
| Level 1 | 407 - 491 | Students working at Level 1 demonstrate a functional working knowledge of computers as tools and a basic understanding of the consequences of computers being accessed by multiple users.  | They apply conventional software commands to perform basic communication tasks and add simple content to information products. They demonstrate familiarity with basic layout conventions of electronic documents. |
| Below Level 1 | < 407 |  |  |

Table 3



Schools, students, and teachers sampling procedures and requirements

This research follows the sampling procedures and requirements laid by the IEA. First, the Hong Kong team submits information of all secondary schools in Hong Kong, including school district, school type, and number of students, to the international research team at the IEA for sampling of 150 schools to conduct main study. In each of the sampled school, IEA randomly sample 20 students from the whole grade 8. Each of the sampled students carries a statistical weight that represent the number of students the sampled student represent among the population of grade 8 students in Hong Kong. The higher the statistical weight, the larger contribution results of student test and questionnaire from this sampled student would count towards the overall result of Hong Kong in this study. If less than 10 students in a sampled school participated in the student test, their student test results and questionnaire data will be dropped.

In total 118 secondary schools, 1338 grade 8 teachers, and 2089 grade 8 students have participated the ICILS-HK study. Overall participation rate after weighting and replacement are: teachers 58.3%, students 68.6%. Since both are below the IEA requirement of 75% (after weighting and replacement) sampling rate, Hong Kong students’ and teachers’ data have been categorized as category 2, thus not included in calculation of the international mean CIL score.

Table 4



Table 5



Table 6



Table 7



Table 8



Table 9



Table 10



Table 11



Table 12



Table 13



Table 14



Table 15



Table 16



Table 17



Table 18



Table 19



Table 20



Table 21



Table 22



Table 23



Table 24



Table 25



Table 26



Table 27



Table 28



Table 29



Table 30

