

# HONG KONG DESIGN INSTITUTE

## Executive Summary

1. The Vocational Training Council (VTC) is a statutory body established in 1982 to provide vocational and professional education and training in Hong Kong. The VTC's training courses leading to formal qualifications are funded by the Education Bureau (EDB). The Hong Kong Design Institute (HKDI) is one of the 13 member institutions of the VTC. Prior to the establishment of the HKDI, the VTC's design-related Higher Diploma (HD) programmes were offered by the Hong Kong Institute of Vocational Education (IVE) at different campuses. In February 2006, the VTC proposed to bring together its three design-related departments of the IVE in five IVE campuses by accommodating them in the dedicated HKDI on a single, purpose-built campus. The proposal also included the reprovisioning of the ageing infrastructure of IVE (Lee Wai Lee) (IVE(LWL)) on a site adjacent to the HKDI. In June 2007, the Finance Committee (FC) of the Legislative Council (LegCo) approved funding of \$992.8 million in September 2006 prices, which was equivalent to \$1,006.3 million in money-of-the-day prices, for the construction of a new VTC campus in Tiu Keng Leng (hereinafter referred to as the Tiu Keng Leng Campus (TKL Campus)) accommodating the HKDI and IVE(LWL). The actual construction cost incurred for the TKL Campus was \$1,287.3 million. The new campus was put into use in 2010/11 (unless stated otherwise, all years mentioned hereinafter refer to academic years). In 2016/17, the four academic departments of the HKDI had 185 teaching staff and offered 21 full-time two-year HD programmes (comprising 19 subvented and 2 self-financed programmes) to secondary school leavers. The total number of students enrolled was 5,476. The Audit Commission (Audit) has recently conducted a review of the HKDI.

## Management of programmes

2. *Over-enrolment of new students and high percentage of short contract staff.* There was over-enrolment of Year 1 new students in many programmes in the past years. In 2013, a Programme Board of the HKDI expressed concern on the situation of student over-enrolment of its programmes and suggested that over-enrolment should be avoided in order to ensure the teaching quality and to prevent oversupply of graduates in the market and in the industry. In 2016/17, 13 of the 21 programmes were over-enrolled. Teaching staff establishment is revised based

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on actual enrolment. The total teaching staff establishment of the HKDI increased by 23, 20 and 16 in 2014/15, 2015/16 and 2016/17 respectively due to over-enrolment. Of the 59 additional teaching staff posts, 55 were filled by staff with a contract duration of one year or less (hereinafter referred to as short contract staff). It was stipulated in the instruction issued by the VTC Headquarters that the posts of short contract staff should not exceed 15% of the total number of teaching posts in accordance with the approved programme plan. Due to over-enrolment of students, the overall percentages of short contract staff were 25%, 26% and 25% for 2014/15, 2015/16 and 2016/17 respectively. In 2016/17, for three academic departments, the percentages were 41%, 30% and 17% respectively (paras. 2.3, 2.4, 2.9 and 2.10).

3. ***Need to provide more analysis in programme proposals and conduct manpower survey on design industry.*** In the period 2012/13 to 2016/17, there were 14 new programmes. Before a new programme is introduced, a programme proposal will be prepared outlining the details of the programme. The proposal will be submitted to the VTC Design Discipline Academic Committee for endorsement and to the VTC Vocational Education and Training Academic Board for approval. Audit reviewed the programme proposals for five new programmes and found that some planning information should be added, for example: (a) no information was included in the programme proposals on how the planned numbers of student enrolment were derived; and (b) no details were included in the proposals on the impact on teaching staff resources. Moreover, Training Boards of the VTC conduct regular manpower surveys and publish manpower reports for various industries. However, manpower needs of some programmes offered by the HKDI are not covered by the manpower surveys of the Training Boards. In the Design Discipline Advisory Board meeting held in November 2011, members considered that a formal manpower survey on design industry would provide better understanding on the manpower requirement in design sector and the findings would be useful to the development of HKDI's programmes. Up to July 2017, no manpower survey on the design industry had been conducted (paras. 2.13 to 2.15 and 2.17 to 2.19).

4. ***Evaluation of programme performance.*** The performance of the HKDI's programmes is measured against seven indicators, viz. enrolment rate, retention rate, pass rate, employment rate, further study rate, student satisfaction and employer satisfaction (para. 2.22). Audit noted that:

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- (a) ***Need to monitor completion rates of programmes.*** The VTC reported the retention rates of modules of its HD programmes (i.e. the weighted average of the retention rates of the individual modules of the programme) but not the completion rate of its HD programmes (i.e. the graduation rate of a cohort of students for the two-year HD programmes). The module retention rates were considerably higher than the programme completion rates because some students might have completed the modules they had started but not completed all the required modules for the programme (paras. 2.22 to 2.24);
  - (b) ***Low completion rates.*** The completion rates of some programmes were low (para. 2.26);
  - (c) ***Target employment rate not met.*** The overall employment rate for graduates of the HKDI's HD programmes was 86.4% in 2016 and had been lower than the target employment rate of 90% set by the VTC since 2012. In particular, the employment rates for graduates of four programmes had not achieved the 90% target in every year of 2014 to 2016 (paras. 2.28 and 2.29); and
  - (d) ***Room for improvement in conducting employer satisfaction surveys.*** The employer satisfaction surveys conducted for graduates of 2014 and 2015 only covered a small number of employers of HKDI graduates. Some programmes were not covered in the surveys. For those programmes covered in the surveys, only a small number of employers were surveyed for each programme, ranging from 1 to 6 (para. 2.38).
5. ***Need to improve the extent of performance reporting.*** The VTC discloses on its website various information/statistics (e.g. number of enrolment, number of graduates and employment rate) of the HKDI together with some other member institutions as a whole. Moreover, the VTC discloses on its website the employment rate of HD programme graduates and the number of HD programmes graduates successfully articulated to full-time degree programmes. However, there was no information on the number of graduates who were employed and those who were seeking employment, and the percentage of graduates who successfully articulated to full-time degree programmes (paras. 2.42 and 2.43).

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6. *Need to arrange more relevant industrial attachment.* Industrial attachment (IA) has been included as a mandatory graduation requirement of all HD programmes starting from the 2012/13 intake. There are four categories of IA. Audit noted that: (a) Category A, i.e. attachment in field or industry relevant to the programme of study, is the most preferred category of IA. In the period 2012/13 to 2015/16, while the number of Category A of IA for the HKDI students increased from 710 to 1,282, the proportion of this Category decreased from 70% (i.e. 710 out of 1,015) to 52% (i.e. 1,282 out of 2,477), compared to the corresponding figures for the average of all VTC HD programmes ranging from 82% to 86% in the same period; and (b) the minimum duration of IA for some HD programmes in design discipline offered by two other tertiary institutions were much longer than that by the HKDI (paras. 2.46, 2.47 and 2.50).

### Campus development and management

7. *Different views on project cost of winning design of HKDI.* In April 2006, the VTC organised a design competition for the HKDI. Contestants were required to keep their project costs strictly within the budget of \$378 million. However, the cost estimate of the winning design was \$470.4 million. The design included a number of cost saving options which, according to the contestant, could reduce the cost estimate by \$93 million to \$377.4 million. On 10 November 2006, the Jury Panel made its final adjudication and recommended the winning design. On 13 November 2006, the VTC Council Secretariat sought the endorsement of the VTC Estates Committee and approval of the VTC Standing Committee on the recommendation of the Jury Panel. The Committees were informed that, taking into account the cost saving options and the views of the Technical Committee for the competition, the revised cost estimate was \$405 million, which exceeded the construction budget for the design competition of \$378 million. On 20 November 2006, the Standing Committee and the Estates Committee held a joint meeting to ratify the Jury Panel's recommendation. However, there was no documentary evidence showing that the Jury Panel was informed of the assessment made by the Technical Committee on the cost saving options included in the winning design on 10 November 2006 when the Panel made its final adjudication (paras. 3.4 to 3.6, 3.8 and 3.9).

8. *Project development of HKDI.* In the project development stage of the HKDI, various structural schemes, i.e. steel primarily (Steel Scheme), reinforced concrete primarily (RC Scheme), and a mix of steel and reinforced concrete (modified Hybrid Scheme), were considered by the VTC. No documentary evidence was available to show that the schemes had been thoroughly discussed and that the

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modified Hybrid Scheme had been well justified (paras. 3.13, 3.15 and 3.25). Audit observed that:

- (a) ***Application for funding from FC not based on modified Hybrid Scheme which was adopted for construction.*** According to the VTC's guidelines, before funding application can be submitted to LegCo, the VTC needs to submit architectural design and costing to the Architectural Services Department (ArchSD) for approval. In the preparation of the funding application to the FC, the VTC submitted the project cost estimate of \$992.8 million based on the RC Scheme to the ArchSD for vetting in March and April 2007. However, on 30 April 2007, the VTC adopted the modified Hybrid Scheme. No documentary evidence was available showing that the VTC had submitted any revised cost estimate to the ArchSD to take into account the fact that the modified Hybrid Scheme was adopted. On 15 June 2007, the project consultant revised the project estimate from \$992.8 million to \$1,064.1 million based on the modified Hybrid Scheme. There was no documentary evidence showing that the VTC had submitted the revised project estimate of \$1,064.1 million to the ArchSD. In the event, the project cost estimate quoted in the funding application paper submitted to the FC on 22 June 2007 was \$992.8 million indicating the adoption of the RC Scheme (paras. 3.16 and 3.17);
- (b) ***RC Scheme not followed.*** In November 2006, when the VTC Standing Committee and the VTC Estates Committee ratified the recommendation of the Jury Panel, the winning design was based on the RC Scheme. Moreover, the project cost estimate submitted by the VTC for vetting by the ArchSD in March 2007 and the project estimate approved by the FC in June 2007 was based on the RC Scheme. Notwithstanding this, the HKDI was eventually built using the modified Hybrid Scheme (para. 3.22);
- (c) ***More accurate information should have been provided to the VTC Council and the committees.*** At a joint meeting of the Standing Committee, Estates Committee and Steering Committee of the VTC held in February 2008, it was reported that the drawings of the RC Scheme had not yet been cleared by the Buildings Department. Audit noted that the three Committees were not informed that the project team had not submitted the drawings of the superstructure based on the RC Scheme to the Buildings Department for clearance (para. 3.24); and

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- (d) ***Project progress reports not submitted to EDB.*** After approval of FC funding, the EDB had not required the VTC to submit progress reports together with updated budget forecasts and outturn income and expenditure statements at quarterly intervals for the TKL Campus development project according to Financial Circular No. 9/2004 (paras. 3.28 and 3.29).

9. ***Management of campus.*** Audit noted the following issues:

- (a) ***Tennis court not open to the public.*** In June 2007, when seeking funding from the FC of LegCo for the construction of the new TKL Campus, the EDB informed the FC that student sports and amenity facilities (i.e. swimming pool, basketball courts, tennis court and gymnasium) at the new campus would be open to the public during non-school hours. However, the tennis court had not been open to the public (paras. 3.35 and 3.36);
- (b) ***Incorrect utilisation rates.*** The HKDI periodically calculated the utilisation rates of teaching venues for management information. For some of the teaching venues, the utilisation rates reported were overstated (para. 3.38);
- (c) ***Room for increasing the use of the Auditorium for event rental.*** For the period from 2013/14 to 2016/17, Audit noted that, for 81 to 129 days a year, the Auditorium was closed for maintenance, and usage of the Auditorium by external parties was on the low side, ranging from 2 to 10 days a year (para. 3.39); and
- (d) ***Malfunction of lifts and escalators.*** There are 13 lifts and 4 escalators (2 long ones and 2 short ones) at the TKL Campus. The number of breakdown cases of lifts and escalators had increased by 174% from 53 cases in 2014 to 145 cases in 2016. All three routine maintenance and service contracts of the lifts and escalators stipulate that the monthly system service availability shall be maintained at at least 99%. The service availability records were not available and the HKDI had not monitored the system service availability. Audit analysis of the log books revealed that the monthly system service availability of 4 escalators had decreased from 99.7% in January 2015 to 71.0% in June 2017. In the absence of suitable roof and enclosure, the services of the two short escalators needed to be suspended during rainy days or adverse weather conditions. Audit examined the service records for the period from 1 January 2017 to

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30 June 2017 and noted that the 2 short escalators were suspended from operation in 21.2% of the available operating time because of adverse weather. One long escalator had been suspended from operation since 31 March 2017 due to a contractual dispute with the contractor (paras. 3.44 to 3.47, 3.49 and 3.50).

### Administrative issues

10. ***Inadequacies in inventory management.*** According to the VTC's requirements, annual stocktaking should be conducted in each financial year. In the 7-year period 2010-11 to 2016-17, stocktaking had not been conducted for three financial years 2010-11, 2012-13 and 2014-15. Stocktaking exercise for financial year 2016-17 was pending as at September 2017. Moreover, a long time had been taken to complete the three stocktaking exercises for 2011-12, 2013-14 and 2015-16. A total of 810 inventory items of original cost of \$2.7 million were found missing in the three annual stocktaking exercises for 2011-12, 2013-14 and 2015-16 (paras. 4.3 to 4.6).

11. ***Campus environmental targets not met.*** Using the 2013/14 as the reference year, the Corporate Environmental Office of the VTC Headquarters set the following campus environmental targets for a two-year review period from 2014/15 to 2015/16: (a) 5% reduction on water consumption; (b) 5% reduction on electricity consumption; and (c) 5% reduction on quantity of paper ordered. Audit noted that the last two of the three environmental targets were not achieved. In April 2016, in order to review energy consumption and improve energy efficiency, the VTC engaged a consultant to conduct an energy audit. In November 2016, the consultant identified several energy saving opportunities to enhance the energy performance. Up to September 2017, the recommendations of the consultancy report were still being followed up by the Safety, Health and Environment Task Force and Central Committee on Safety, Health and Environment (paras. 4.19, 4.20, 4.22, 4.23 and 4.25).

### Audit recommendations

12. **Audit recommendations are made in the respective sections of this Audit Report. Only the key ones are highlighted in the Executive Summary. Audit has recommended that the Executive Director, VTC should:**

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### *Management of programmes*

- (a) ensure as far as possible that the number of students enrolled should not exceed the plan by a significant margin and any significant deviation from the plan should be fully justified (para. 2.11(a));
- (b) take measures to plan the teaching staff requirement more accurately and to address the high percentage of short contract staff (para. 2.11(d));
- (c) include in the programme proposals more details on the planned number of student intake and impact on teaching staff (para. 2.20(a));
- (d) consider conducting a manpower survey on the design industry periodically and take into account the results of the survey in its programme planning and review (para. 2.20(b));
- (e) consider monitoring the programme completion rates in addition to the module retention rates (para. 2.40(a));
- (f) ascertain the reasons for lower completion rates of some programmes and identify areas for improvement (para. 2.40(b));
- (g) take measures to improve the employment rate of HKDI graduates with a view to meeting the target employment rate of 90% (para. 2.40(c));
- (h) review the criteria for selecting employers for the employer satisfaction survey and take measures to encourage graduates to give consent for the VTC to contact their employers (para. 2.40(e));
- (i) disclose the key performance information and statistics of the HKDI and the other member institutions separately, such as the enrolment



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rate, completion rate, employment rate and employers' satisfaction on its graduates (para. 2.44(a));

- (j) disclose on its website information on the number and the percentage of HKDI graduates who successfully obtained employment and those who successfully articulated to full-time degree programmes (para. 2.44(b));
- (k) take measures to increase the proportion of Category A of IA for the HKDI's HD programmes (para. 2.51(a));
- (l) conduct a review on the minimum duration of IA for the HKDI's HD programmes and consider if there is merit in extending the minimum duration (para. 2.51(c));

### *Campus development and management*

- (m) for future design competitions, if the competition requires the entry designs to fulfil the mandatory budget requirements, thoroughly assess the cost estimates submitted by the contestants before the Jury Panel made its final decision on the result of the competition (para. 3.10);
- (n) for future capital projects:
  - (i) provide up-to-date cost estimate to the ArchSD for comments in seeking funding from the FC of LegCo (para. 3.31(a));
  - (ii) enhance project information provided to the Council and the relevant committees to facilitate them to make informed decisions (para. 3.31(c)); and
  - (iii) take measures to ensure that before adopting a development scheme, the various schemes should be thoroughly discussed and the decision to adopt a particular scheme should be well justified and approved (para. 3.31(d));
- (o) further explore the feasibility of opening the tennis court to the public during non-school hours (para. 3.53(a));

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- (p) take measures to ensure the correctness of the utilisation rates of teaching venues (para. 3.53(b));
- (q) monitor the problem of repeated breakdown cases of the lifts and escalators and, if necessary, take action to address the problem (para. 3.53(f));
- (r) ensure that the contractor attain the performance target on maintenance services under the maintenance and service contract of escalators (para. 3.53(g));
- (s) explore whether any measures can be taken to increase the operating time of the two short escalators and endeavour to resume as soon as possible the service of the long escalator which had been suspended (para. 3.53(h) and (i));

### *Administrative issues*

- (t) conduct annual stocktaking in a timely manner in each financial year according to the inventory guidelines (para. 4.10(a));
- (u) strengthen its inventory control to minimise loss of inventories (para. 4.10(b)); and
- (v) endeavour to achieve the campus environmental targets (para. 4.26(a)).

13. Audit has also *recommended* that the Secretary for Education should, for future government subvented projects, in accordance with Financial Circular No. 9/2004, take measures to ensure that the VTC submits to the EDB project progress reports together with updated budget forecasts and outturn income and expenditure statements upon approval of capital subventions and thereafter at quarterly intervals (para. 3.32).

## Response from the VTC and the Government

## **Executive Summary**

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14. The Executive Director, VTC and the Secretary for Education agree with the audit recommendations.