

PROVISION OF PROFESSIONAL TRAINING TO MEET GLOBAL PROCUREMENT CHALLENGES IN HONG KONG

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Abstract: The technology today is so fast that quickly changes the traditional business process. Supply chain management is becoming the profession of the future – an extension of buyers' job. New professional education in purchasing and supply management should be demanded by Hong Kong's business world to maintain its status as a global procurement centre and a commercial window of China.

INTRODUCTION

Records show that as early as the thirteenth century B.C. purchasing played an important role in business. Nowadays, in the developed countries, it would be difficult to find an organisation, large or small, that does not have the purchasing function. Any savings you make on the purchasing side go straight to the bottom line (*BBC1 Business Breakfast, 3 June 1998*) so the successful implementation of purchasing principles can definitely have a positive impact on the overall success of an organisation. The technology today is so fast that predicting the future gets harder all the time. Purchasing and supply management is no exception - they are bound to face many changes. Recently, there are a number of notable moves of some giant companies signify the drastic changes in establishing electronic marketplace that might quickly evolve the traditional business process.

Moreover, it was pointed out by Vice Prime Minister, Mr. Wu Bang Guo in the Beijing International Logistics Conference held in November 1999 that purchasing and supply chain management would have significant growth in the 21st century. Starting from 1 Jan 2000, the National Tendering Law became effective in China, which was a milestone for China's professional practice of procurement. And targeted in 2020, the government purchase of China will be opened to APEC.

In the light of the foregoing, new professional education in purchasing and supply management should be demanded by Hong Kong's business world in order to maintain its status as a global procurement centre and a commercial window of China. Such new professional training shall impact on Mainland's supply chain development because its education infrastructure in this profession is not mature.

However, the educationists in Hong Kong still deem purchasing as an operational and narrow function, do not respond quickly to this speedy and dynamic changes in Hong Kong's business environment in training up 'business persons' in purchasing management. Therefore, the goals of this study were to investigate:

1. the job market and opportunities for purchasing personnel,
2. the implications of recent trend of supply chain globalisation,
3. the skills required from the view of employers and practitioners, and
4. how an enhanced vocational education is to be developed to cater for such vast development.

METHODOLOGY

The information was collected through the following four channels apart from literature review.

1. A job market survey had been done to study the market demand of the purchasing personnel by analysing the jobs advertised in different newspapers as detailed in Appendix 1.
2. 1442 questionnaires were sent to practitioners, industries and past graduates of purchasing courses (both part-time and full-time) from Aug to Oct 1999 to study their expectations of purchasing training. 145 were undelivered mail due to outdated addresses and 105 completed responses were returned and analysed.
3. 153 past graduates were interviewed over the phone about their career development and expectation of procurement training.
4. Key persons of professional bodies– The Chartered Institute of Purchasing and Supply (CIPS, UK) and The Institute of Purchasing and Supply of Hong Kong were interviewed of the trends of purchasing profession.

JOB MARKET AND OPPORTUNITIES FOR PURCHASING PERSONNEL

From the job vacancies in the newspaper listed in Appendix 1, it is found that:

1. Out of 108,085 vacancies, 19.6% fall in the category of purchasing (Appendix 2).
2. 74% of those purchasing jobs require Technical Institute (TI), F.5 and F.7 graduates. Needless to say, the employability of TI graduates is higher than that of F.5 and F.7 graduates who do not have any vocational nor professional training (Appendix 3).
3. Chances of advancement in career are available for purchasing personnel and the salary ranges for different positions are satisfactory. However, merchandisers seem to have higher salaries than those work as purchasers and storekeepers have the lowest salaries (Appendix 4 and 5).

From our questionnaires and telephone interviews, it was found that the career development of our graduates was in line with our findings from the newspaper. There is a great demand of purchasing personnel and their prospects are flourishing.

1. Even in the economic downturn, 81% of our fresh purchasing graduates in 1999 could find their first jobs within one month (Appendix 6) and the starting salary was between HK\$7,000 to HK\$7,500 (Appendix 7). Some of their salaries have reached HK\$8,000 to HK\$8,500 after working for a few months. The salary range for the past graduates is from HK\$7,500 to HK\$30,000 and the median is HK\$15,000.
2. 89% of the past graduates have been promoted to supervisory or managerial grade (Appendix 8). Examples of the posts they are holding are Assistant Supplies Officer in Government Supplies Department, Supplies Officer in Cathay Pacific, Purchasing Manager in Sun Generation, Senior Purchasing Officer in Hong Kong International Terminal and in Philips HK Ltd. 77% are still working in the purchasing and supply field but those 14% handling general administration have to take care of materials management duties such as inventory control and procurement. Therefore, strictly speaking, 91% of them are still employing their purchasing expertise (Appendix 9).
3. Apart from purchasing, our graduates are competent to work in other areas such as warehousing management, production and materials planning, logistics and marketing.

Therefore, in our curriculum design, we equip our students with multi-skills and prepare them to work in any function of the supply chain.

IMPLICATIONS OF RECENT TREND OF SUPPLY CHAIN GLOBALISATION

In the past few months, some giant companies of different industries have notable moves in their purchasing and supply functions such as Sears, Carrefour and Oracle have formed the first B2B online exchange for the retail industry (Appendix 10). The implications of those events are:

1. Fast Growth of e-commerce

According to Gartner Group, the value of B2B e-commerce transactions in the Asia/Pacific, outside Japan, is forecast to grow at a compound annual growth rate of 155% from 1999 through 2004, and will reach a size of US\$995.8 billion in 2004. The Internet will become the backbone of electronic purchasing. It will be used for purchasing transactions such as order tracking, funds transfer and receipt acknowledgement. Systems for low strategic value purchases will stress on electronic efficiency while the challenge will be using the information created by electronic commerce in a truly strategic fashion.

2. Speed up the development of Supply Chain Management

The concept of SCM has been in operation for more than 20 years. It is only in the last few years that SCM-enablers and its technologies such as Electronic Data Interchange (EDI), product barcode labeling, Point of Sales (POS) scanning and Cross Docking have begun to be fully exploited to the benefit of consumer, vendor and retailer. The improved utilisation of SCM technologies and enablers can help us to improve inventory performance, reduce working capital, allow an improved return on assets by reducing the warehouse and storage space required providing appropriate replenishment. Inventory turns of two or four times per year are still very common but 'best practice' retailers can achieve more than 10 inventory turns, with a strongly positive impact on their financial performance.

3. Lots of opportunities in SCM

'According to the export supply chain management road map study commissioned by the HKANA, through implementation of the supply chain management the export industry has the potential to save HK\$9.2 billion... businesses were reminded that use of supply chain ideas is still relatively immature in Hong Kong and that much needs to be done.' (*South China Morning Post, 19 May 2000*). The same SCM survey indicates the major barriers are mainly due to lack of training and cultural problems. Comparatively, 'lack of technology' is the least serious problem that can be promptly improved by more capital investment (Appendix 11). However, much more effort has to be spent to change one's mindset and vision.

4. Reduction of head counts in tactical purchasing

Despite the encouraging figures from our research, in the long run, as tactical purchasing becomes more automated, head counts in purchasing departments will be reduced. However, according to the research paper 'The Future of Purchasing and Supply: A Five- and Ten-year Forecast', structural purchasing departments will not be eliminated and supplier evaluation and development will remain in-house. That means the education and training provided should enable our students to acquire a much greater degree of professional skill than may have been sufficient in the past.

Summarising the four points above, we can forecast that Internet marketplaces with dynamic pricing will reduce the sourcing and negotiation effort and will make it easier and cheaper for anyone to buy. Desktop Internet catalogues will put purchasing in the hands of user. More and

more companies will set up private, supply orientated virtual networks through which they can access, develop and manage their suppliers and their suppliers' suppliers. The more of the network that becomes mapped, the more risk and behaviour can be predicted. The challenge for supply, or network managers is to control risk prevention, but to tune the network for optimum performance. By mapping supplier capacity across the whole of the supply chain, purchasing staff will be able to identify opportunities for process rationalisation and gain a better realisation of planning effectiveness. They can tune their networks to perform more effectively. It will be important for purchasing and supply management staff to recognise that they are co-ordinating activities and services, instead of buying goods.

SKILLS REQUIRED FROM THE VIEWS OF EMPLOYERS AND PRACTITIONERS

Per Appendix 12 and 13, it is interesting to discover that:

1. Our graduates, who are less experienced and greatly involved in routine purchase rank 'negotiating skills' as the number one skill whilst their bosses think 'purchasing knowledge and concepts' and 'analytical ability' are more essential. It is because as noted in the trend of supply chain, purchasing people will be involved in partnering arrangements. Although negotiations will not become any less important, the nature of them will change. Instead of heavy reliance on emotions and 'heated' debate, the focus will be one 'win-win' situation especially in the supply chain; the goals will be to establish winning relationships that result in lower total costs.
2. There is a great disparity in computer literacy as well, about 85% of employers require skills but only 54% of graduates share the same feelings. It is probably due to the demand of management information and the efficient operations from senior staff.
3. Bosses are more demanding than the subordinates since most of the scores given by industries are higher than those given by our graduates.
4. All the training areas are ranked far above '3' except 'Civic Education', which is scored as '2.94'. High scores of above '4' evidence the significance of English and supply concepts.

HOW AN ENHANCED VOCATIONAL EDUCATION IS TO BE DEVELOPED TO CATER FOR SUCH VAST DEVELOPMENT

The primary role of IVE in purchasing education and training is to provide students with a basic understanding of purchasing. Partnership with industries not only is a must to keep our purchasing training competitive but also facilitates the arrangement of industrial visits, talks and forums, attachment and research projects.

The shift of Hong Kong towards service based activities has increased the need for development of certain generic skills, which are fundamental to nearly all occupations, and are required in addition to more job specific skills. These include:

1. language capabilities, particularly in English and Putonghua,
2. IT skills, involving familiarity with the use of relevant computer software, and the implications of continuing development of hardware and telecommunications, and
3. development of what may be described as a service culture.

There is an external force to drive the change as well. Recognition by professional bodies is ranked highest in the expectations of purchasing courses because purchasing is not widely recognised as a 'profession' yet. Professional recognition not only upgrades the status of the course but also increases the employability of graduates (Appendix 14). Therefore, linkage with professional bodies is essential and those professional bodies should be extended to the ones with international status. It is unavoidable that the curriculum design is influenced by these bodies' examination syllabus.

Learning is no more limited in classrooms. Visits, industrial projects, talks and forums, attachment programmes are effective teaching methods too. Through those non-classroom activities, students will have the opportunities to learn project plans, questionnaire design, data collection and hypothesis testing to obtain insights in business situations. They are also encouraged to use computer applications for decision making, illustrating concepts and principles and presenting results of their study.

CONCLUSION

The skills required by the purchasers in the 2000 can be categorised into three areas:

1. enterprise (having a good understanding of the overall business)
2. interpersonal, and
3. technical.

That means that purchasing professionals must be essentially and interpersonally competent and have a good grasp of the total enterprise. It is the challenge for the trainers to develop education and training programmes that will allow purchasing professionals to acquire the appropriate knowledge and to develop the right skills for coping with the dynamics of the business world.

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Appendix 1: Source of Information *

Newspaper	Weekday	Total no. of publications	Total no. of jobs	Duration
Career Times	Fri	17	24,637	1/10/99 – 28/1/00
SCMP	Wed & Sat	34	23,246	2/10/99 – 29/1/00
Job Market	Tue & Fri	33	28,419	1/20/99 – 28/1/00
Recruit	Mon & Fri	28	25,301	1/10/99 – 31/1/00
Ming Pao	Wed & Sat	34	6,482	2/10/99 – 29/1/00

* The data was collected by the students of IVE (ST) studying Diploma in Purchasing and Stores Supervision

Appendix 2: Distribution of Job Markets

Purchasing	19.6%
Administration	14.1%
I.T. & Engineering	23.3%
Accounting	9.2%
Marketing & Sales	20.9%
Production	4.6%
Others	8.3%
	100 %

Appendix 3: Qualifications Required for Purchasing Jobs

F.5 or above	35.1%
F.7	16.7%
Graduates of Technical Institutes	22.2%
Degree holders	8.7%
Others (Not specified)	17.3%

Appendix 4: Working Experience Required for Various Positions

Years of Experience	Job title	Percentage
1 – 3 years	Shipping clerk, Assistant Merchandiser, Purchasing Clerk	34.7%
4 – 6 years	Buyer, Merchandiser	38.1%
7 – 8 years	Senior Buyer, Senior Merchandiser, Purchasing Manager, Merchandising Manager	12.8%
9 – 10 years	Senior Purchasing Manager, Senior Merchandising Manager	12.3%

Appendix 5: Salary Range (HK\$/Month)

Purchasing

Job title	1- 2 yrs	3 - 5yrs	5yrs or above
Assistant Purchaser	6 – 10 K	7 – 13 K	9 – 15 K
Senior Purchaser	8 – 12 K	10 – 18 K	13 – 25 K
Purchasing Manager	/	15 – 20 K	18 – 35 K

Merchandising

	1 – 2 yrs	3- 5 yrs	5 yrs or above
Assistant Merchandiser	7 – 9 K	8 – 13 K	10 – 15 K
Merchandiser	8 – 10 K	9 – 15 K	13 – 20 K
Senior Merchandiser	/	15 – 25 K	18 – 25 K
Assis. Merchandising Manager	/	15 - 25 K	20 – 25 K
Merchandising Manager	/	15 – 30 K	20 – 38 K

Warehousing

	1- 2 yrs	3- 5 yrs	5yrs or above
Inventory Clerk / Storekeeper	6 – 8 K	8 – 10 K	10 – 12 K
Stores Manager	/	10 – 18 K	15 – 20 K

Appendix 6: Length of Time for The First Job to be Offered After Graduation (for 1999 Graduates)

One month	81%
Within 2 months	11%
Further Studies	4%
Unemployed	4%

Appendix 7: Monthly Salary of Full-time Graduates

1999 graduates	HK\$7,000 – 7,500
Median ('94 grad)	HK\$15,000
Lowest ('97 grad)	HK\$7,500
Highest ('92 grad)	HK\$30,000

Appendix 8: Position Held (Official Title Held by Past Graduates from 1991-1998)

Supplies/ Purchasing Clerk/ Merchandiser	11%
Supplies/ Purchasing Officer/ Supervisor	63%
Assistant Supplies/ Purchasing/ Procurement Manager	15%
Supplies/ Purchasing/ Procurement Manager	11%

Appendix 9: Occupations of Past Graduates (1991 – 1998)

Purchasing	70%
General Administration	14%
Stores / Materials planning & Control	7%
Sales and Marketing	5%
Others (Students, Catering)	4%

Appendix 10: Fourteen Cases of Recent Moves in Purchasing and Supply Functions

Industry	Companies	Contents
1. Retailing	GlobalNetXchange between: Sears (U.S.) Carrefour (Europe) Oracle (largest provider of software for e-business)	- First global B2B online exchange serving the retail industry which will significantly reduce their purchasing expenses and greatly enhance supply chain efficiencies with their trading partners - Initially focuses on \$80 billion supply chain purchases from 50,000 suppliers, partners and distributors - Serves 11,290 stores in USA, Latin America and Europe
2. Retailing	Partnership between: Kingfisher (UK) Marks & Spencer (UK) Tesco (UK) Albertson's (US) CVS (US) K-Mart (US) Safeway Inc. (US) Target (US) Auchan (France) Casino (France) Royal Ahold (The Netherlands)	- Handles 100,000 suppliers, partners and distributors - Serves over 300,000 stores of combined sales of over Euro 300 billion - Investment amounts to Euro 100 billion in the first few years

Industry	Companies	Contents
3. Retailing (Convenience Stores)	RetailersMarketXchange between: Chevron (US) McLane(US- subsidiary of Wal-Mart) and Oracle	- Serves US\$200 billion convenience store industry
4. Aerospace and defence	JV between: Boeing Lockheed Martin BAE SYSTEMS and Raytheon	- Based on the Commerce One MarketSite Portal Solution, powered by Microsoft - Global sales > US\$400 billion - Serves 37,000 suppliers, hundreds of airlines and national government - Total procurement outlay >US\$71 billion -
5. Aerospace	Airbus Industrie's Material Support Internet	- As of 4 April 2000, 120 airlines that regularly access with the many other services provided on this site could also use e-commerce to order spare parts in real time
6. Aerospace	GE Aircraft Engines	- Launches several web sites that will connect commercial airlines to suppliers and customers over the Internet - Allows users to order and search for parts, check the status and maintenance of their engine parts, view detailed pictures of their parts while they are in repair, receive up-to-the-minute service bulletins
7. Thermo- plastics	JV between: DuPont Dow Chemical BASF Bayer Celanese unit Ticona	- Serves US\$50 billion market for plastic injections moulders - Initial investment of US\$50 million
8. Automobile	JV for on-line car-parts exchange between: General Motors Ford Daimlerchrysler Oracle	- Combined purchase > US\$160 billion
9. Government	Strategic alliance between: American Management Systems Inc and Freemarkets Inc.	- E-empower public purchasing

Industry	Companies	Contents
10. All	Strategic alliance between: Cable & Wireless HKT and Oracle	<ul style="list-style-type: none"> - Launches B2B electronic marketplace across a broad range of industries and their buying organizations and suppliers in Greater China - Invests >HK\$400 million over the next three years
11. Logistics and transportation	Global Transport eXchange between: Portsportal.Com, the e-commerce group of Hutchison Port Holdings and Baltrans Holding Ltd.	<ul style="list-style-type: none"> - Serves >2,300 shippers - Using Arena Technology - E-commerce marketplace for buyers and sellers of logistics and transportation to meet and transact
12. Government	Government Supplies Department of Hong Kong SAR	<ul style="list-style-type: none"> - Started Electronic Tendering System (ETS) on 7 April - Annual subscription fee HK\$800 or paying a charge of HK\$20 each time - Contracted out ETS to Computer & Technologies International Limited - Number of suppliers will increase from 15,000 to 16,000
13. Government	Office of Government Commerce (OGC) of UK	<ul style="list-style-type: none"> - Came into full operation from 1 April 2000 - Provide a central resource of procurement skills for departments and set strategic framework within which departments operate - Target at saving 1 billion pound sterling by the start of 2002 - 90% of all high-volume, low-value routine procurement to be carried out electronically by 2001 - 50 staff in London HQ, 75% professionally qualified by April 2000
14. Government	Government Procurement of China	<ul style="list-style-type: none"> - National Tendering Law was effective from 1 Jan 2000 - Shanghai appointed 403 procurement specialists as consultants to work out and advise governmental purchases in April 2000 - Formulate a policy and long-term plan for the purchase in 2000 - Target to open governmental purchase to APEC in 2020

Appendix 11: Barriers for Implementation of SCM

No information sharing	67%
Lack of vision	58%
Lack of skills	57%
Lack of training	57%
Lack of technology	43%

Appendix 12: The Preferred Skills that IVE Students Should Attain

Skills	Graduates	Industries
Negotiation Skills	89.1%	84.9%
Purchasing Knowledge and Concepts	78.3%	93.9%
Analytical Ability	73.9%	90.9%
Interpersonal Skills	65.2%	78.8%
Computer Literacy	54.4%	84.9%
Language Proficiency	54.4%	66.7%
Others	10.9%	18.2%

Appendix 13: The Rating of Importance of Different Training Areas

5=Very Important and 1=Least Important

Purchasing and Supply	4.64
Materials Planning and Management	4.32
Language and Communications (English)	4.03
Information Technology Applications (EDI, MRPII, ERP etc)	3.90
Legal Studies	3.83
Industrial & Commodity Knowledge	3.57
Other management studies (e.g. Marketing, Finance etc.)	3.57
Chinese Language and Communications (Putonghua)	3.48
Civic Education	2.94

5=Most Adequate and 1=Least Adequate

1. Arrangement of the external recognition by purchasing professional bodies (e.g. The Institute of Purchasing and Supply of Hong Kong and The Chartered Institute of Purchasing and Supply, CIPS UK)	3.93
2. Method of instruction: lectures, role plays, discussions and case studies	3.90
3. Exploring of experience by hiring expertise with subject related experience	3.90
4. In-depth specialised subjects in Purchasing and Supply (e.g. Legal Framework, Purchasing Strategy etc.)	3.90
5. Industrial projects by students	3.80
6. Talks/ Forums by practitioners	3.77
7. Exploring of experience by local industrial visits	3.76
8. Design for external professional examinations	3.67
9. Attachment programme in industry	3.43
10. Exploring of experience by overseas industrial visits to China, Taiwan and other Asian countries	3.34