Abstract: In Hong Kong, sheltered workshops play a crucial role in the vocational rehabilitation for the disable. The management direction of the sheltered workshops must be dynamic and responsive to the changing needs of the community and the market (Cykana, 1987). On the other hand, it must ensure equal opportunity in vocational employment for different types of the disabled. To ensure fair chances for the multiple handicapped person in sheltered employment, a special process has been adopted in the Spastics Association of Hong Kong (SAHK). It includes vocational assessment, job analysis, job analysis and client-to-job matching which are designed under the shell of a common philosophy, the Pető’s concepts. The management objective of the sheltered workshops of the Association lies mainly on the integration of the productivity oriented and the treatment oriented models.

Introduction
The ‘Green Paper for Rehabilitation Service’ in 1992 stressed the full participation and equal opportunities for the disabled in the context of employment and vocational rehabilitation. According to the ‘Rehabilitation Programme Plan’ sheltered employment is an integral part of the vocational rehabilitation system (Hong Kong Government, 1990). It should contain elements of productive and remunerative work together with physical rehabilitation. Thus a sheltered workshop should provide therapeutic training as well as vocational training to its workers. However, very few sheltered workshops fulfil this dual role.

Products produced by the sheltered workshops should reach a certain standard of quality so as to attract from factories. High productivity may mean low therapeutic values as the job may be routine and highly stressful. On the other hand, the time spent in receiving therapeutic programmes in the sheltered workshop may reduce the works’ productivity and reduce the centre’s profit. Sheltered workshops have to struggle to keep the balance between a productivity oriented model and a treatment oriented model.

However, profit making and treatment are not necessary mutually exclusive to one another in the production process of the sheltered workshop. Instead, increase in profit making can actually increase the income and work incentives of the workers which in turn motivates them to participate in the therapeutic programme. On the other hand, therapeutic programmes can improve the physical abilities of the workers which in turn increase their productivity to meet the demand that arise from profit making.

Management Sheltered Workshop
Sheltered employment in SAHK endeavours to provide a meaningful occupation for the multiple handicapped persons who cannot enter into open employment. It helps the handicapped to develop their physical, social and economic potential. Our sheltered workshops establish planned and controlled working environments to accommodate the limitations which arise from the physical and mental conditions of the clients. In addition, our sheltered jobs provide opportunities for work
adjustment and advancement to the clients. To direct the sheltered workshops toward these goals, our managers face the following problems.

In the sheltered workshops, the professional staff are usually social workers or therapists. Since these people are not trained in marketing, they have to learn marketing skills on the job, and learn how to keep in touch with the supply and demand of the market. They may have problems in communication with their non-professional colleagues such as trade instructors. Most of the trade instructors received training in technical institutes which stress productivity oriented technique and knowledge. Conflicts are created between the professional and the non-professional staff regarding the management of the sheltered workers because of their different views of them.

To resolve these conflicts, we encourage staff with different perspectives and backgrounds to share and exchange their views in production and marketing of the productions. They are encouraged to keep in touch with updated technologies in production and the actual supply and demand in the open market. We employ a transdisciplinary approach for the planning and delivery of our vocational and therapeutic programme.

Under the transdisciplinary approach, the career boundary of different disciplines is blurred and their role and duties overlap. To minimise conflicts, we adopt Petö’s concepts as the common philosophy which provides a common perspective from which different disciplines of staff identify and approach the problems of the sheltered workers. With this approach, we incorporate therapeutic principles into vocational activities. This in turn ensures optimal performance of the workers at work, instills their motivation to work and ensures safety during work.

**Shortcomings of Traditional Vocational Assessment**

Traditional methods of job-to-client matching usually involves a series of standardised tests, collectively termed vocational assessment. Vocational assessment is conducted solely on the client. Based on the results of the assessment, the client is allocated a suitable job. Different types of vocational assessment have been applied to the disable population with various degrees of success. The major limitation of the existing vocational assessment regimes lies in their application to the multiple handicapped persons. Their assessment results suffer from a clustering effect as most of them score low on the standardised tests. This may led to discrimination towards the multiple handicapped, making them unable to get a place in the sheltered workshops. Undoubtedly, this violates the principles of equal opportunity for this group of clients in the context of sheltered employment.

Multiple handicapped people are entitled to be functional members of the society. In the past 10 years, we have demonstrated that with adequate training and adaptations, even severely multiple handicapped persons can participate in the production work. In SAHK, the client-to-job matching procedures include vocational assessment of the client together with an analysis and modification of the job. The design of the client assessment and the job analysis are based on the common philosophy adopted by the association.

**Vocational Assessment, Job Analysis and Client-to-job Matching in SAHK**

In our sheltered workshops, each worker will be matched to a variety of suitable jobs for which they are allowed to choose to participate. Each production activity or trade in the sheltered workshop is broken down into components which are then grouped in meaningful way to form a number of jobs. The sheltered workers are expected to participate in different trades and be flexible to prepare for the changes of work tasks.
Vocational programmes in our sheltered workshops are divided into 3 categories. They are (1) vocational specialisation, (2) vocational training and (3) task analysis of work. Each category has different vocational requirements of the clients and different degree of intervention from the staff (figure 1).

According to the Petö’s concepts, physical handicapped clients can make use of 5 basic motor patterns to perform a number of modified functional activities with the provision of specially designed physical settings. Based on the vocational assessment, clients are divided into 2 groups. Group 1 clients are those who rely on the basic motor patterns while Group 2 clients do not. Clients of Group 2 will participate either in vocational specialisation or vocational training while that of Group 1 will participate in task analysis of work.

Job analysis consists of 3 procedures: (1) trade analysis, (2) task analysis and (3) movement analysis (figure 2). Trade analysis involves breaking down a trade into component tasks. It aims to maximise productivity through division of labour. Task analysis involves further breaking down of a component task into a series of component steps. It aims to simplify the complexity of each component task. Movement analysis determines the combination of basic motor patterns that can be used to accomplish a component step together with designing suitable furniture and aids that facilitate the use of the selected basic motor patterns. Some of the cognitive deficits of clients can also be compensated by the provision of suitable aids. In our sheltered workshops, a job may refer to a component task or a combination of them.

In most circumstances, Group I clients participate in jobs at the component task level while Group II clients participate in jobs at the component step level. Based on the complexity of the physical
and cognitive requirements of the component step, job at the component step level are further subdivided into 3 levels, namely level 1, 2 and 3 in order of increasing complexity.

Group I clients are matched with the jobs at the component task level according to the physical appearance, communication, attention, spatial/time orientation, work tolerance and functional academic matching. On the other hand, Group II clients are matched with the jobs at the component step level according to the physical and cognitive matching.

The 3 levels of job within the category of task analysis work together with the category of vocational training and vocational specialisation provide opportunities for work advancement to the sheltered workers in the sheltered workshop.

Conclusion
The use of the vocational assessment, job analysis and client-to-job matching under the shell of Pető’s concept realise the principles of equal opportunity and full participation for the multiple handicapped persons in the context of vocational rehabilitation. It is hoped that such methods can re-develop the sheltered workshop to be both a good rehabilitation centre and a good productive centre in the society.

References