Report of Dry and Wet Waste Separation Pilot Programme in Hong Kong Institute of Education

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Introduction

According to the statistics from Hong Kong Environmental Protection Department (HKEPD, 2010), the total quantity of average daily disposed municipal solid waste at the remaining three strategic landfills in Hong Kong is 9,114 tons, 40.2% of which is the putrescible, also called wet wastes or organic waste. And the dry waste is recyclable waste other than wet waste, such as paper, old clothes, plastics, metal can, and so on. If dry and wet waste is not sorted out, the recyclables from dry waste will be contaminated by wet waste and eventually turns to unrecyclable. Therefore, dry and wet waste separation is so important as to reduce the increasing pressing problem of landfills. From 2003 to 2004, a pilot programme has been launched on dry and wet waste separation of domestic waste by Hong Kong government. As is shown in the report of the pilot programme, only 20 to 25 percent of participants and lack of financial support lead to the low success rate. Due to the continuing concern of dry and wet waste segregation, our programme to improve students' awareness of dry and wet waste separation in Hong Kong Institute of Education was decided to be conducted from January, 2012 to June, 2012. University students, as considered, sharing the comparatively similar educational level and achieving higher cultural level, may have higher environmental awareness. The estimated participation rate is higher and we can collect more ideas from the research applied among them. This project aims to investigate how much dry and wet waste is generated in HKIEd, and to compare the result before and after we disseminate the waste separation knowledge. In addition, obstacles of dry and wet waste separation will be found.

Methods and process

Data collection included hand-delivered questionnaires and records of daily total quantity of solid waste generated in student hostels. Dissemination of dry and wet waste separation was made by posters and guest lecture.

The mixed waste

Separating the mixed waste

The wet waste after separation

The dry waste after separation

The first period of data collection of the proportion of dry and wet waste in the total waste that generated from student hostels was from March 15 to March 31, 2012. Every 9th and 11th floor in three hostels (Northcote Hall, Granthan Hall and Robert Black Hall) were selected to be the data collection spots. The data were collected once at the same time every day during that period.

In April, 600 questionnaires were distributed to student residents in the student hostels. Altogether, 390 questionnaires were valid among the 420 questionnaires collected back. This survey instructed in Cantonese comprised several areas: 1) personal particulars, 2) awareness of dry and wet waste, 3) attitudes towards the dry and wet waste separation pilot programme set in HKIEd.

In the meantime the promotion of dry and wet waste separation was also going on from April to May. Posters with concepts and samples of dry and wet waste and procedures of dry and wet waste separation were designed and put up all around the campus. A lecture talk centered on the situation of solid waste in Hong Kong was delivered during this disseminate period, which was aimed to educate students with deeper understanding of the significance of dry and wet waste separation in Hong Kong.

After the promotion period, the pilot programme was launched for half a month. New rubbish bins for collecting dry waste were prepared to be put aside the original

rubbish bins in the hostels from May 15 to May 31. And instruction sheets were

pasted near the rubbish bins. That was

the second period of recording work of daily disposed solid waste in the student hostel.

Result and Discussion

According to the survey, a considerable proportion of participants have certain knowledge about environment, but more propaganda and education need to be done. The result of our questionnaire shows that about 65.5% of our respondents have not heard of the concepts of dry and wet waste (Fig.1). And only 27.4% of all the

respondents can clearly distinguish dry and wet waste when they were asked to pick out all the wet waste from various types of waste in the questionnaire (Fig. 2). The dissemination of dry and wet waste seems not prevalent.

After our promotion, in the light of the result of waste separation, nearly all of the waste dumped in the recycling bins is dry waste, except a tiny box of candy. That

shows students can distinguish dry and wet waste in practice after promotion.

Fig.1 Question: Have you ever heard of the concepts of dry and wet waste?

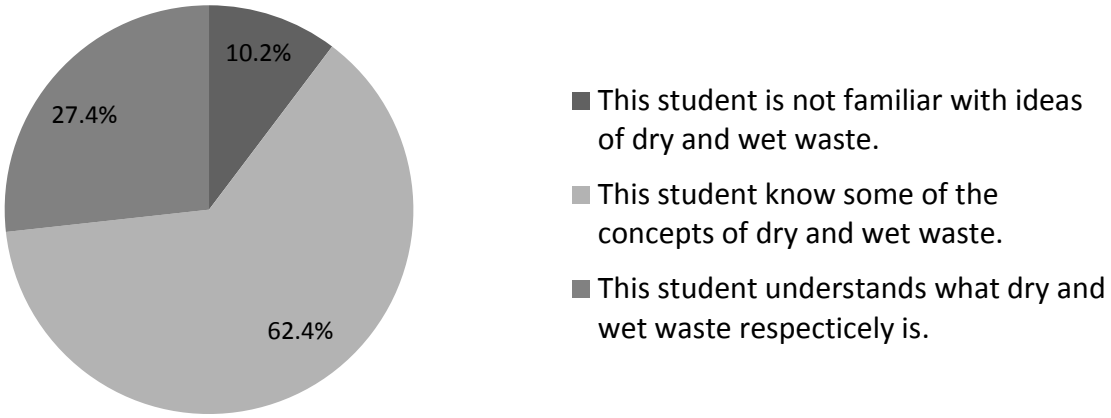

Fig. 2 the students' knowledge level of dry and wet waste at a rough estimation

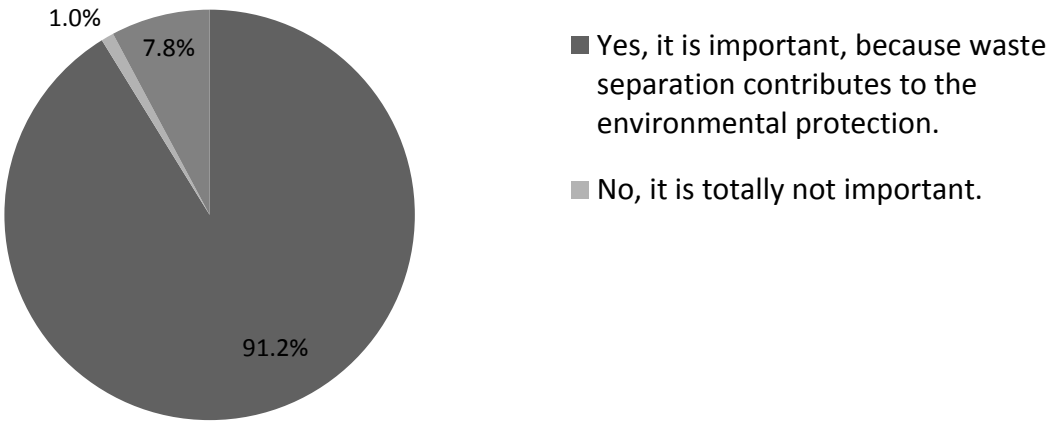

Fig. 3 Question: Do you think that dry and wet waste separation is important?

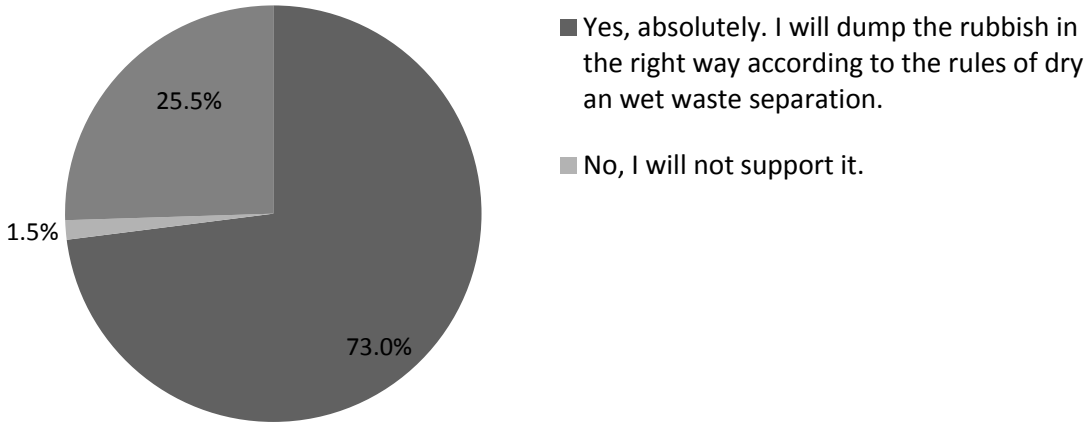

Fig. 4 Question: Will you participate in the dry and wet waste separation pilot programme conducted in HKIEd?

Most of the students participated in the survey show a positive attitude towards the separation programme. From the Figure 3, most of the respondents (91.2%) recognize the importance of dry and wet waste separation, and 73.0% of all claim that they are willing to support the separation by action (Fig. 4).

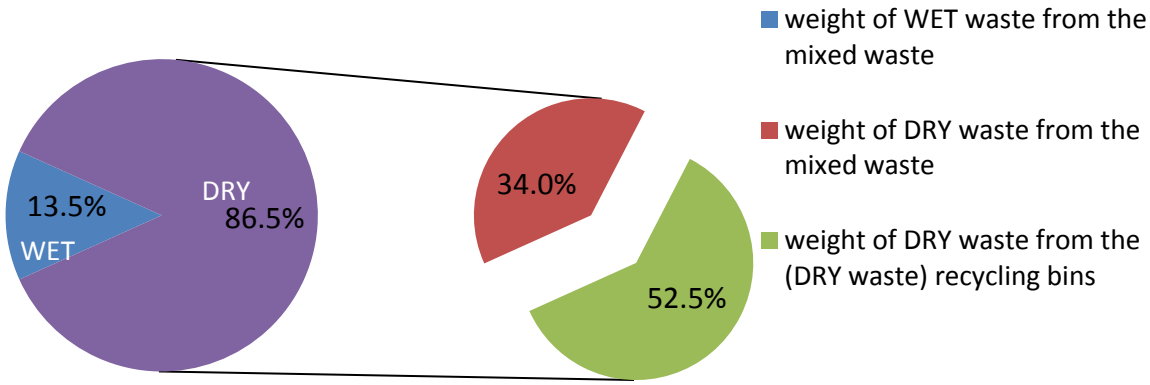

Fig. 5 The percentages of weight of total DRY waste and the separated DRY waste of total waste generated from HKIEd student hostels

However, in fact, the separation rate is not very high. According to our record of the separation rate in the hostels, which is showed in Figure 5, only 52.2% of dry waste has been dumped into the recycling bins, and the rest of dry waste mixed with wet waste cannot be recycled any more.

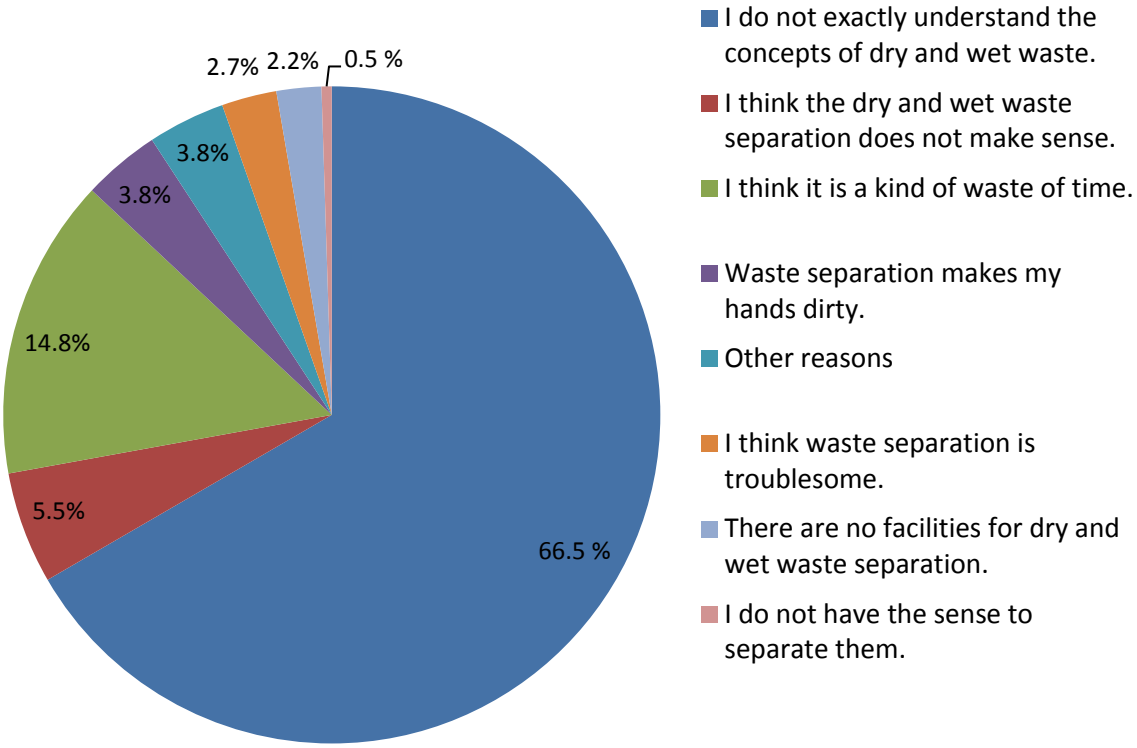

Fig.6 Question: What factors lead you not to follow the rules of dry and wet waste separation?

Students are more likely to support the separation programme at the beginning, but some of them fail to do so due to some realistic obstacles. The question to explore those factors is also included in the questionnaire. The major participants consider the biggest obstacle is that they don't know the principle of classification. The reason ranked second for low efficiency of waste separation is wasting time. A few students (1.5%) take the dry and wet waste separation as a meaningless issue. (Fig.6)

Conclusion

On the basis of the research result and the obstacles of waste separation that are revealed in this programme, a majority of students are willing to support this kind of separation. Nevertheless, their actions are all limited by several of obstacles: inefficient promotion and education of waste separation knowledge, insufficient financial and manpower support for running this programme, and lack of a complete waste separation and management system. Dry and wet waste separation is of great significance in terms of not only sustainable environmental development but sustainable economic development. There is still a long way for developing a dry and wet waste separation system in Hong Kong.

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References

Hong Kong Environmental Protection Department, (HKEPD, 2010). Monitoring of Solid Waste in Hong Kong 2010.