



Summary of the SEA-ABT surveys collecting information on available teaching capacities and identified needs for courses and modules within Higher Education (HE) and Continual Professional Development (CPD)



Summary of the Survey on beverage technology curriculum development

- **Purpose of survey:** to collect information on existing Lifelong Learning (LLL) teaching tools including curricula (bachelor, master degree), subjects, training courses in universities and institutes with existing study programmes in the field of Food Science and Technology.
- **Findings:** none of the Thai institutes has Beverage Technology as a full curriculum at the HE level i.e. BSc, MSc or one year certificate. Most of the Thai universities have Beverage Technology as a course/module or as part of a course/module. None of them have CPD in Beverage Technology. However, the SEA-ABT EU partner institutes do provide teaching activities at various levels (full curriculum or courses/modules, CPD courses) on the same topic.
- **Conclusion:** ‘Beverage Technology’ as a full HE study programme/curriculum is a need for Thailand as well as CPD trainings that are of interest of the beverage manufacturing sector stakeholders and the project SEA-ABT is offering a great opportunity to develop both.



Summary of the Preliminary survey on the needs of the beverage industry

- **Purpose of survey:** to collect competences and skills needs of the operators and professionals of the beverage industry and, at large, beverage production chain. The preliminary survey was filled in by 26 beverage companies to collect their interest on a beverage Technology course and how they would like the course to contribute in develop their employees' skills and knowledge.
- **Findings:** beverage companies (future employers of the graduates) pay more attention to real practicing or hands-on learning and skills which is the big gap in the beverage industries. **Food law, management, marketing and communication** are of second importance. The industry supports the employer's development in both higher education and training. The **short-term training** is the most preferred educational timing by all beverage companies followed by a course that provide **classes after working-time** as a 1 year-certificate course. The beverage industries need competent employees who have practical skills, understand food law and regulation, be able to communicate and the full course for 1 year and short training course is satisfied them. The long distance learning such as via **webinar** or **online course** is also preferred by the companies.



Summary of the **brainstorming session** during the SEA-ABT stakeholder meeting 11 February 2016, Bangkok, Thailand

- **Mode:** 70 participants (23 SEA-ABT partners, 15 academia and government authorities, 32 companies) were asked to answer questions on post-it papers:
 - What are your challenges? List the top 5.
 - What is the skill that you should have to solve question 1 challenges?
 - What is the most difficult task that you have encountered and you can solve it?
 - From the answer of question 3 what is the skill that you use?
 - If you are promoted, what is the 5 skills that your successor should have?
 - What is the skill that difficult to find in your one level below employers
 - What are the skills that people who is in one level of position above you should have?
- **Findings:** **soft skills** such as **time management, problem solving, communication** and **leadership** are important. Furthermore **technical skills** such as understanding of **processing, equipment, raw materials and ingredients, food safety** and **regulation, process design** and **hygiene** are equally important for product and processing improvement.



Summary of the **brainstorming session** during the SEA-ABT stakeholder meeting 11 February 2016, Bangkok, Thailand

- **Mode:** open floor, free discussion with 50 people from food and beverage industry, authorities and academia
- **Findings:** Representatives from the beverage sector expressed their main concern about skills needs on product development, quality of product, regulation, opportunity of marketing and all the expertise on business activities related to exporting overseas and to EU (e.g. ingredients and products regulations, law, labelling, fair trading, economics aspects, advertisement and promotion of Thai products, Innovation, consistency of supply chain, ingredients regulation, and shelf-life of their products). For this business task, they imply that the beverage industry professionals and workers have knowledge of **shelf-life extension**, **ingredients regulation** for beverage product and **supply chain management** that, thus, should be added in the course curriculum.



Summary of the Specific survey on the needs of the beverage industry

- **Purpose of survey:** After collecting the results of the preliminary survey, the data was used to draft a structure of HE and CPD which was sent to 144 stakeholders including companies (SME and large enterprises), the academia from university and research institutes. From the outcomes of the preliminary survey, the structure of Higher Education study programme (HE) and Continuing Professional Development (CPD) courses were designed as well as a SWOT analysis. 144 respondents filled in the survey.

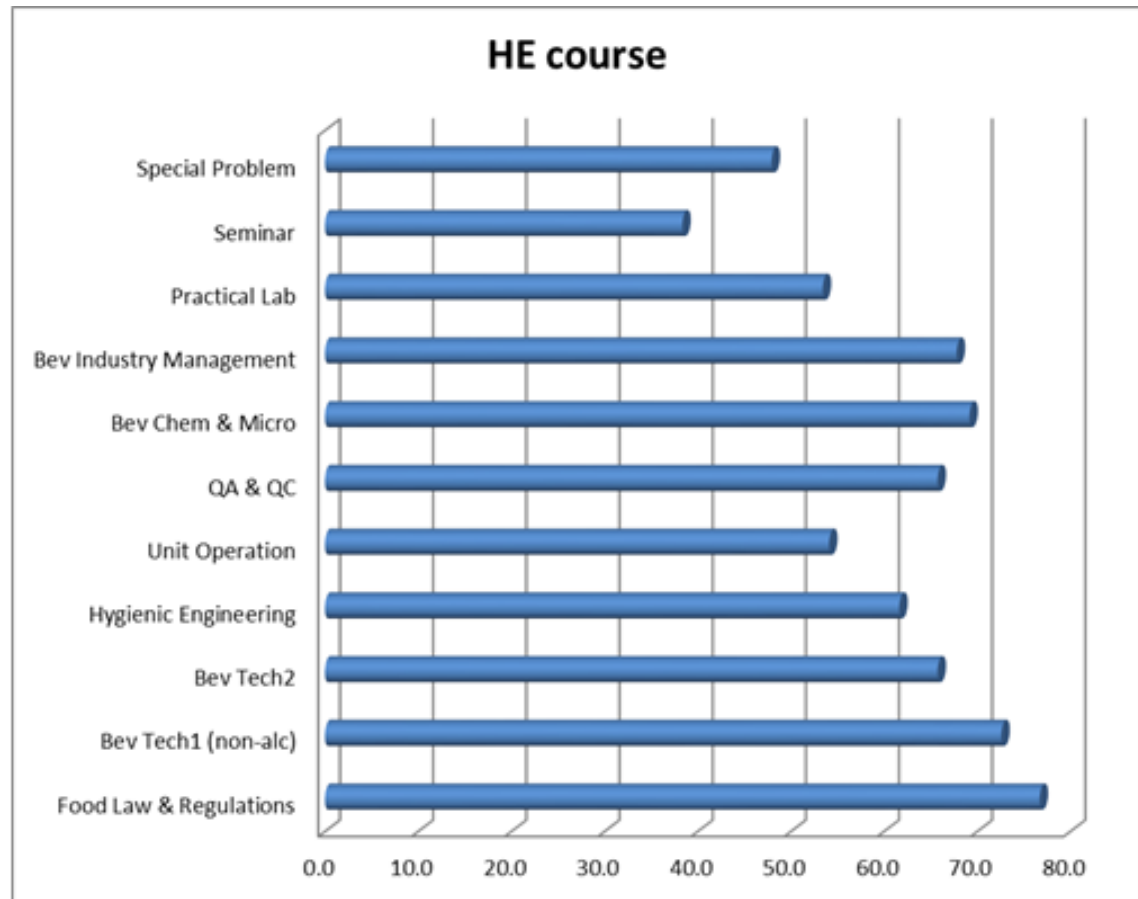


Findings from the Specific survey on the needs of the beverage industry

Modules/disciplines preference for HE:

Findings: Respondents gave preference higher than 50% to the subjects/disciplines listed in the chart.

Conclusions: the Thai industry has main concerns on food law and regulation about beverage and non-alcoholic beverage based also on the local production and processing of tropical fruit and milk. On the other side, surprisingly they seem to be less interested to improve the personal/soft skills via the development of activities on specific case studies (Special problems) activity that generally is used to improve team working and problem solving abilities.



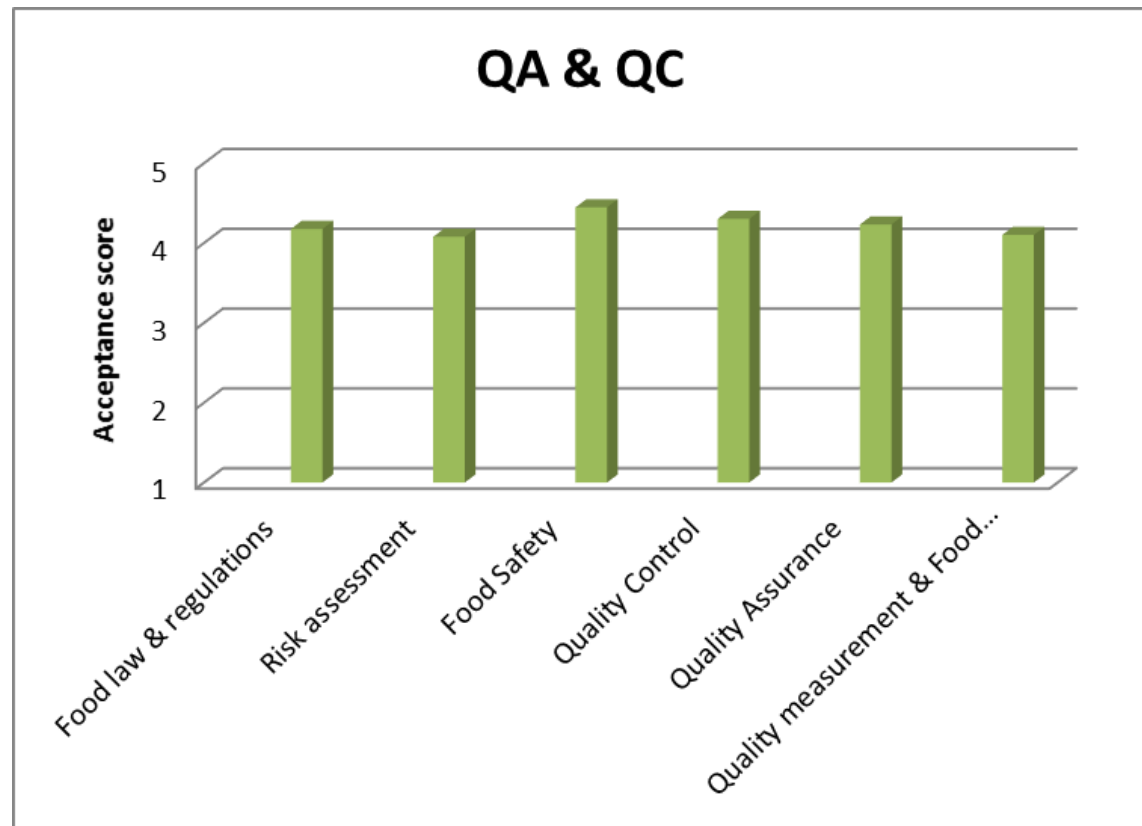


Findings from the Specific survey on the needs of the beverage industry

Modules/disciplines preference for CPD courses

Findings: The preferred topics/disciplines/subjects within CPD was QA and QC which obtained the highest score as a preferred topic for CPD.

Conclusions: For CPD, the only area that gain high score is QA & QC and main attention is given to topics like food safety, quality control, quality assurance, food law and regulations, followed by risk assessment and quality measurement and food. For food safety, the specific interest is on how to make sure the product is safe for consumption.



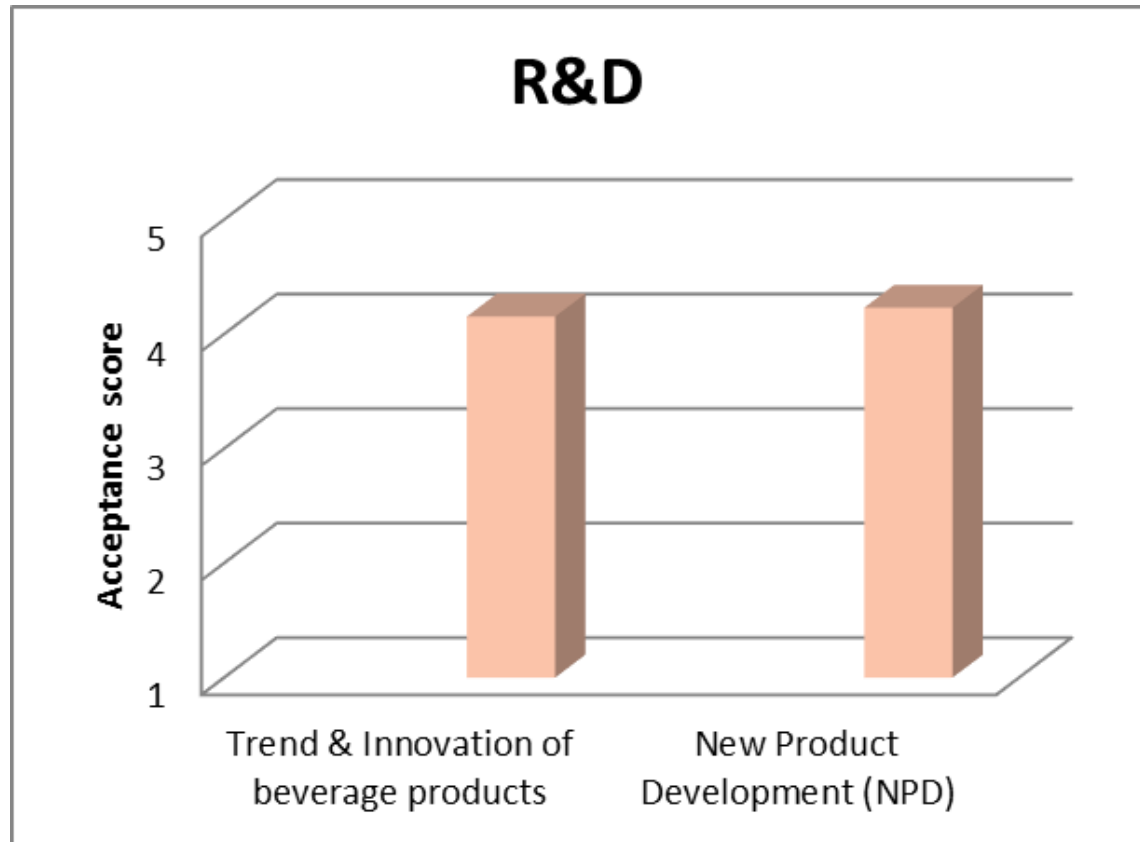


Findings from the Specific survey on the needs of the beverage industry

Modules/disciplines preference for CPD courses

Findings: Research and Development as a preferred topic for CPD, both food product innovation and process innovation was included.

Conclusions: In Product Development area, both “Trend and innovation of beverage products” and “New product development” collected similar preferences and interest even if, overall, lower than the topics of QA&QC (fair to high acceptance).



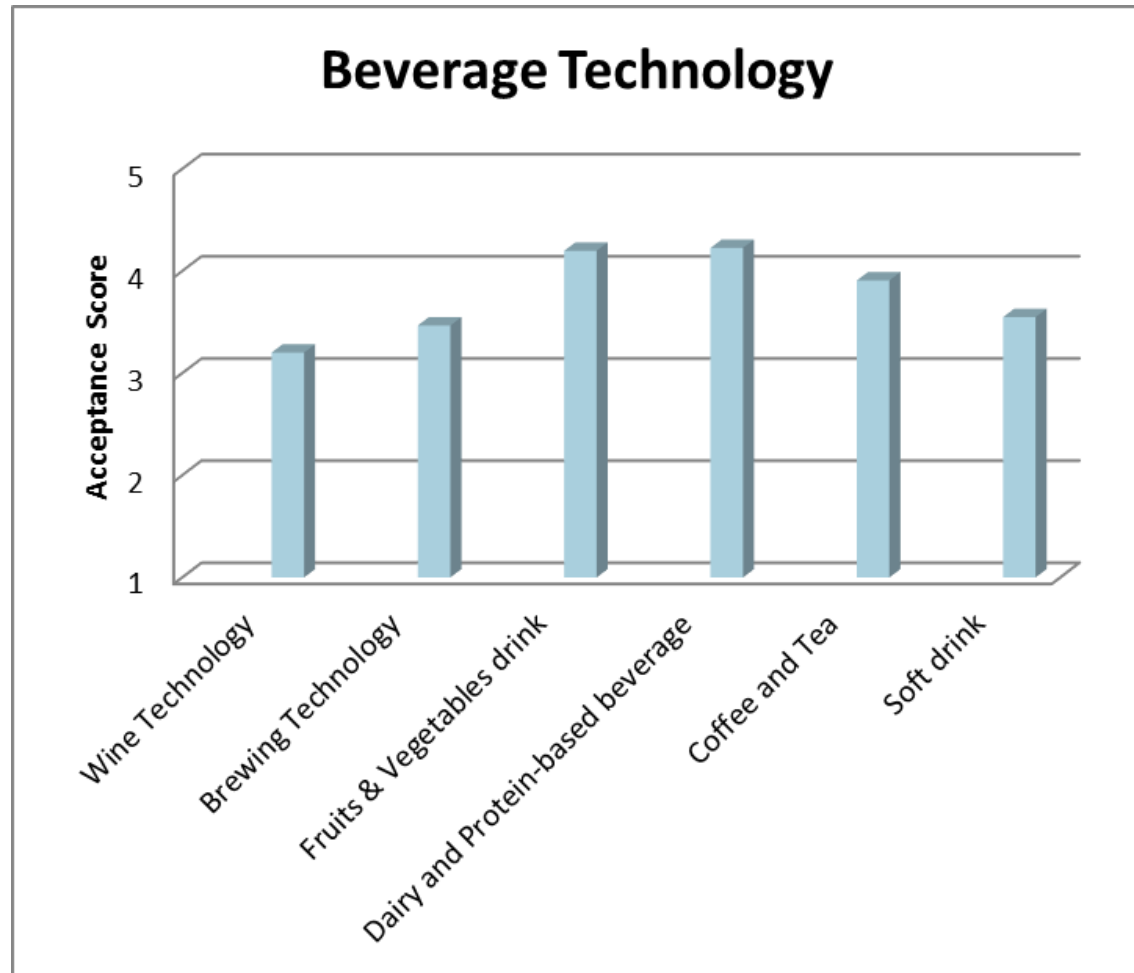


Findings from the Specific survey on the needs of the beverage industry

Modules/disciplines preference for CPD courses

Findings: Beverage technology as a preferred topic for CPD.

Conclusions: Taking into account specific beverage sectors, fruits and vegetables drink as well as dairy and protein based beverage were the ones that were more preferred for the development of CPD activities in beverage technology followed by coffee and brewing technology. This may be due to Thailand being an agricultural country and rich in tropical fruit and vegetables. Therefore, there is a need for knowledge and training in those areas.

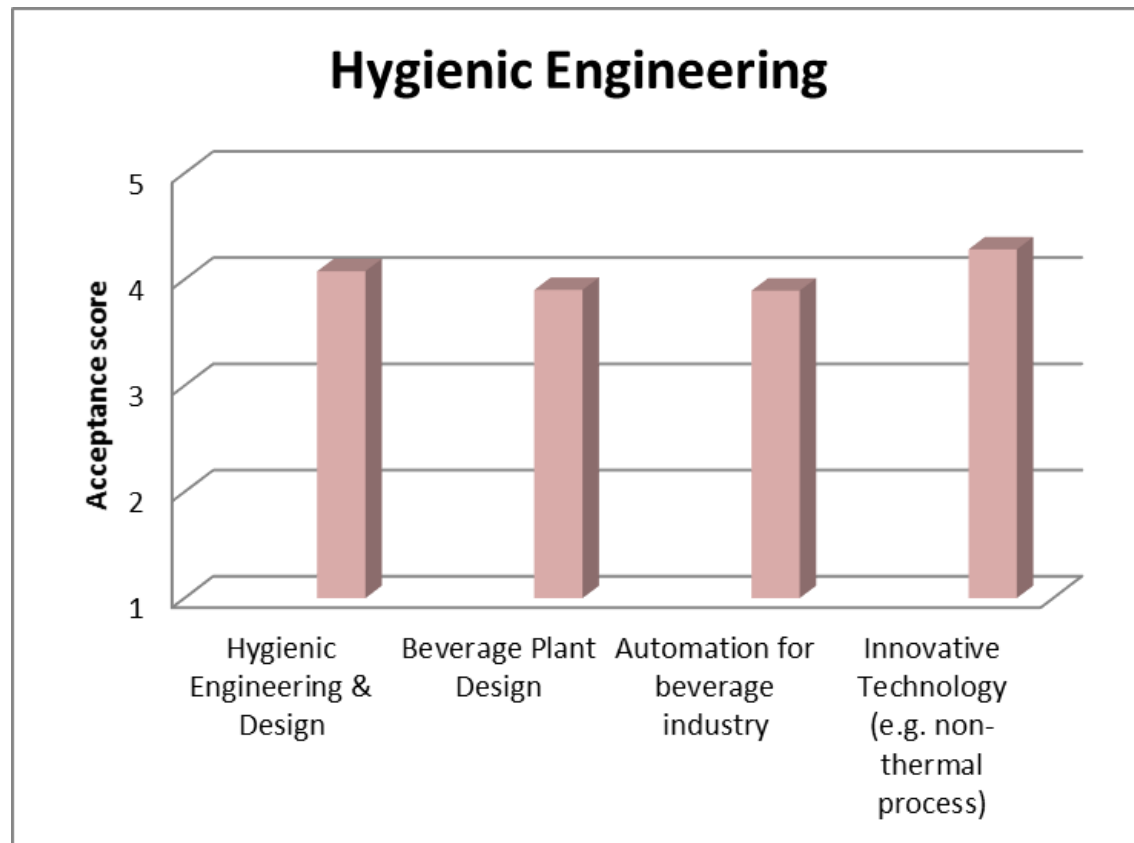




Findings from the Specific survey on the needs of the beverage industry

Modules/disciplines preference for CPD courses

Findings: In the Hygienic Engineering area of topics, “Innovative technology” (e.g. non-thermal processes) gained the highest score followed by “Hygienic engineering and design”. Beverage plant design and automation for beverage industry has similar acceptance score from 3-4 (fair to high).

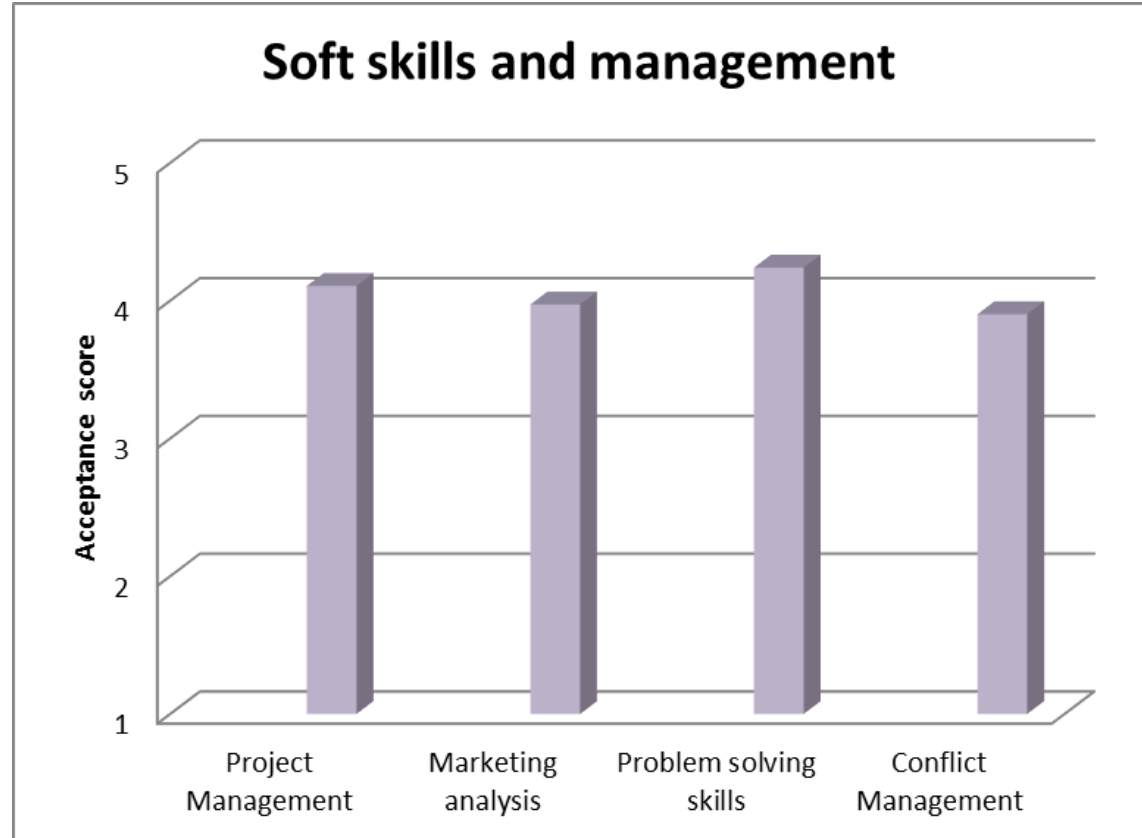




Findings from the Specific survey on the needs of the beverage industry

Modules/disciplines preference for CPD courses

Findings: Among the personal and transversal skills, it resulted that industry is more interested in the improvement of problem solving and project management of employers. However, marketing analysis and conflict management are also preferred by stakeholders.





Findings from the Specific survey on the needs of the beverage industry

Modules/disciplines preference for CPD courses

Findings: In the “Other preferred subjects” respondents were free to include any missing topic/course/discipline. In this area packaging technology and supply chain management, were found of interest for industry as well as logistics and planning. For higher positioning worker small percentage preferred executive course for beverage entrepreneurship.

