



Master Brewers Association of the Americas

## Analysis of 2014 Higher Education Survey

In September, MBAA Higher Education Committee surveyed brewer members about higher education brewing programs. In total, 304 members responded. Job categories represented include brewing production (73%), quality assurance (41%), plant management (37%), executive management (30%), packaging (29%), maintenance (21%), safety (20%), barrel program (19%), and human resources (13%). Companies represented ranged in capacity from 5 million bbls + to less than 10k bbls and local brewpubs or restaurants. Smaller breweries were more highly represented, with breweries of 50k bbls or less comprising 47% of total respondents. The majority of respondents (93%) expected at least one new hire in the following 12 months.

### Four-Year Degrees

Applicants with four-year degrees in brewing and fermentation science were highly valued by the majority of brewer members (60%). When considering candidates from a four-year program, an internship or practical experience was deemed very attractive but not essential by most (55%), although 29% indicated that they found practical experience essential.

When asked what qualifications breweries looked for in new hires with a four-year degree in brewing and fermentation science, 85% of respondents checked “laboratory skills,” 78% “engineering skills,” 34% “business skills,” and 36% “other.” “Other” included brewing process knowledge (12%), practical experience (6%), management training or leadership skills (4%), and a good work ethic and attitude (3%). One respondent indicated that further brewing certification would be required on top of a four-year degree.

Respondents were asked what jobs in their company would require a four-year degree. Most (55%) preferred a four-year degree for management and leadership positions, with about a third of those specifically requiring a four-year degree for brewmasters or head brewers. Other positions where a four-year degree was preferred included quality positions (24%), brewery positions (26%), lab technicians (17%), and engineers (14%). A total of 17% of respondents indicated that they did not have any positions requiring four-year degrees at this time.

### Two-Year Degrees

Applicants with two-year degrees in brewing and fermentation science were less highly valued than those with four-year degrees, but more so than those with certification without a degree.

Respondents indicated that new hires with a two-degree in brewing and fermentation science should have the following qualifications: laboratory skills (81%), engineering skills (56%), business skills (21%), and 39% other. Similar to four-year degrees, the most valued “other” qualifications were brewing process knowledge (16%), practical experience (6%), management or leadership skills (2%), and a good work ethic and attitude (3%), as well as general science knowledge (2%) and mechanical skills (3%). In addition, 3% of respondents indicated they had never gotten an applicant of this skill level.

When asked what jobs required a two-year degree, about half (55%) named brewery positions, including the position of head brewer. Other positions requiring a two-year degree included cellar (15%), quality (11%), packaging (11%), lab (11%), and leadership positions (26%). Leadership positions requiring a two-year degree were generally of lower level than those requiring a four-year degree. 18% of respondents did not have any positions requiring two-year degrees, and 5% made no distinction between two- or four-year degrees.

## **Certification Only**

Applicants who have certificates from recognized institutions were moderately valued, assuming they had no further training.

Respondents indicated that new hires with a brewing certificate should have the following qualifications: laboratory skills (67%), engineering skills (50%), business skills (16%), and 46% other. "Other" included brewing process knowledge (24%), practical experience (8%), and a good work ethic and attitude (5%), with an emphasis on willingness to learn. Mechanical skills were sought by 3%, and leadership skills and training were not as highly sought (1%).

Positions requiring a certificate included brewery (52%), cellar (27%), packaging (15%), and supervisory (10%). 13% indicated that they do not require certificates, and 4% indicated that they would only hire the candidate if the certificate were supplemental to a degree.

## **No Certification or Degree but with Prior Experience**

The survey indicated that more than half of breweries (57%) valued employees with brewery experience regardless of prior education. When asked what positions would be offered to new hires with no certification but with multiple years' experience working in a brewery, respondents indicated that they would be able to take packaging jobs (57%), brewery (56%), and cellar jobs (52%). Some (16%) responded indicating that uncertified new hires would be able to take any position depending on the amount and type of experience. Other possible positions included maintenance (25%), production (27%), management (22%), and warehouse (20%), according to job availability and applicant skill level.

## **Outsourcing and In-house Resources**

The survey found that at least 56% of breweries were outsourcing their brewery research to consultants (56%), other breweries (30%), international research institutions (33%), and other entities (35%) such as local universities and companies. Most (88%) respondents would consider or might consider transferring these projects to a university with a reputable fermentation science program, and almost all (95%) would be or might be willing to establish or encourage new research projects at a university with such a program.

Breweries surveyed were more likely to have in-house laboratories for their analytical needs than to outsource. The majority of brewer members had in-house labs for alcohol (71%), wort (76%), yeast (88%), water (66%), and microbiology (85%), with fewer facilities for malt (44%) and hops (37%). Analytical work was outsourced at fewer breweries: alcohol 55%, wort 25%, malt 29%, hops 34%, yeast 38%, water 51%, and microbiology 51%.

Establishing inter-university research programs available to the industry was rated as important (53%) or very important (29%). Inter-university analysis programs were similarly rated as important (49%) and very important (32%).

## **Brewery Education Needs**

Finally, the survey asked whether brewery needs for practical and theoretical learning were being met in the current environment. The responses were mixed, with 61% of respondents indicating that current education is sufficient while 34% requested more learning opportunities. Breweries content with current education cited internal resources and training opportunities; however, networking and outsourcing was mentioned by 51%. Respondents requesting more training usually cited specific holes in education (i.e., mechanics and engineers, laboratory needs, craft brewing, automation, PLC programming, gluten-free, and hop/malt sensory analysis). In addition, 9% of respondents indicated that they would seek more formal education for themselves or employees, but are unable to budget the time or money for formal training courses. When asked how often brewers have difficulty finding resources to answer questions, most responded that they did not have this problem very often (once a year).