

BRIDGING THE TALENT GAP



REPORT ON OBIO HEALTH TO
BUSINESS BRIDGE™ (H2BB™), 2017

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EXECUTIVE SUMMARY

The value of internships to employers and graduates seeking jobs has been clearly demonstrated. Internships lead to higher rates of full time employment for the interns, salaries trend higher and, for employers, there is greater likelihood that offers will be accepted and employees will stay with the company. OBIO's Health to Business Bridge™ (H2BB™) program responds to a need for business trained interns expressed by 96% of Ontario's health science company CEOs in a recent survey consultation. The H2BB program has been developed with unique features to support successful outcomes and OBIO has conducted research with interns, company supervisors and assigned mentors to track progress and measure success.

KEY LEARNINGS

AWARENESS OF ONTARIO'S HEALTH SCIENCE INDUSTRY

A key benefit of developing and implementing OBIO's H2BB program has been to raise the level of awareness of the health science industry in Ontario with students and recent graduates. The program exposes participants to the role of start-ups, health innovation as a business and the value of health technology to community health and well-being. The placement of interns in a business capacity raised awareness of the complexity of the marketplace, reimbursement challenges and selling into healthcare markets. Data suggest that increased awareness may translate into intention to follow a career in the field.

UNIQUENESS

From all accounts, OBIO's H2BB business internship is unique in Ontario and possibly Canada. The uniqueness is characterized by the engagement of Subject Matter Expert Advisors ("advisor") to mentor the intern throughout their internship and coach them to be successful and deliver value to the company they are placed in. Specially designed workshops augment academic learning and bring a healthcare industry perspective to general skills. The program was also seen as superior to other internships on delivering what is promised to the interns themselves.

SOFT SKILLS

Consistent with other research, soft skills were ranked higher in importance by industry than sector specific or technical skills. The need to improve upon soft skills has been well documented but after years of academic course work devoted to case studies, team projects and class presentations, satisfaction ratings by managers show the skills gap in this area remains. In the face of e-learning, remote learning and the difficulties with teaching and evaluating performance on soft skills in an academic setting, this situation is unlikely to improve. It can be postulated that perhaps the only way to improve the ratings of Masters' level graduates on their soft skills is to maximize their exposure to real world workplaces with an advisor and supervisor coaching them toward success.

SENSE OF COMMUNITY

An unexpected benefit of the H2BB program that was expressed by interns was that it creates a sense of community whereas they had been alone and somewhat isolated in their other internships. This sense of community was considered important for the support it offered, growth of future networks, and overall confidence and well-being.

TALENT

The H2BB program has the potential to pull talent and educated employees into the health science industry by creating awareness and knowledge about the industry and supporting interns through their initial job placements.

Performance ratings for business interns on many factors suggest that the issue of talent or talent shortages has many facets. Overall the talent that is there and the skills that are present need to be developed to meet the needs of business. Development on the job has the highest probability of success in the real world and can be accelerated by mentoring and workshops.

PLANNING CYCLE

Industry operates on budgets and planning cycles that are distinct from both the academic year and government granting schedules. There is a limited degree of flexibility in the amount of time needed to plan for, interview, budget for and hire an intern. Four months appears to be the minimum and some company supervisors suggested they need to budget a year in advance. Going forward it will be important to coordinate the program funder, the awareness and application process for interns and the company HR activities. Government must recognize that funding must be confirmed in a timely way and cover at least two years to help industry plan. Companies must commit to posting positions early to get the best skills matches and the highest performing interns. They also need to be responsive to sometimes tight hiring schedules and shorten the time for decision-making to retain the best candidates. Academic institutions must build awareness of the opportunity and collect applications for internships early in the school session.

RECOMMENDATIONS

1. Government and academia should continue to partner with OBIO to deliver the H2BB health science business internship program.
2. OBIO should develop a module on building awareness of and addressing soft skill deficits.
3. OBIO should work with government, academia and industry to coordinate planning and budgeting cycles so that H2BB can place qualified and motivated business interns in a timely fashion.
4. OBIO should be supported to expand on the number and types of events or services that build the sense of community.
5. The mentorship part of the program should be expanded to increase students' access to non-academic advisors.
6. OBIO should be supported to develop a process for increasing the engagement of the health science industry with education providers to improve alignment of priorities and student development.
7. OBIO should continue to build awareness of the program among health science companies and academic partners to continue to pull business talent into industry and develop it.

INTRODUCTION

2017 marks the launch year of an innovative internship program in Ontario designed and operated by the Ontario Bioscience Innovation Organization. Known as Health to Business Bridge™ or H2BB™, this program, is a collaboration between academic institutions and Ontario's health science industry with the goal of giving industry easier and more successful access to business interns and giving students exposure to and experience in the health science and health technology sectors in the province.

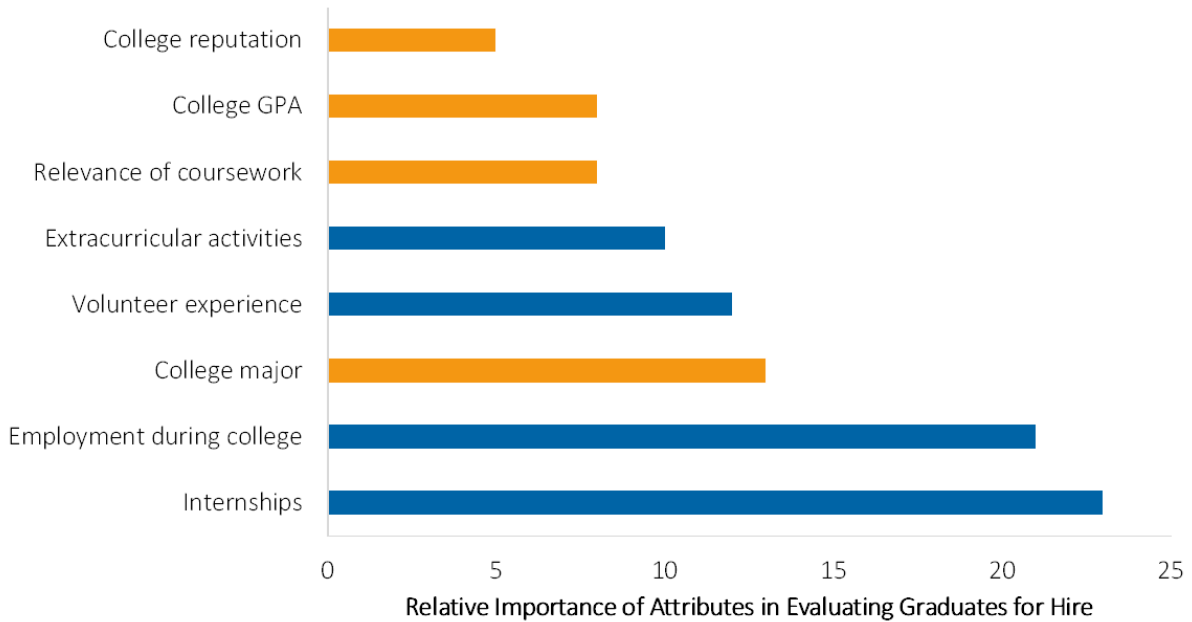
Studies evaluating internships and tracking the employment status of students who have participated in paid and unpaid internships have concluded that there is value to the student and to the employer particularly in the case of paid internships. Statistics from the US show that following an internship, there is a higher rate of full time employment for interns, salaries trend higher and there is greater likelihood of accepting an offer from the employer and higher retention of the employee. The job offer rate to interns was 67% in 2017 and the acceptance rate was 76.4% resulting in an average conversion rate from intern to full time employee of 51%. At one year, more than two thirds of these employees had stayed in their job and at five years half were still with their company.¹

Employers stated that recruiting is the main reason they offer internships. They find about half of their interns through open applications and most of the remainder from career centres. Faculty contacts accounted for only about 10%.

A study conducted by The Chronicle of Higher Education and American Public Media's Marketplace in 2012, on what employers are looking for when hiring recent graduates found that internships are number one well ahead of college major, GPA or relevance of coursework.²

1. National Association of Colleges and Employers "The Class of 2016 Student Survey" and "The 2017 Internship and Co-Op Report"
2. The Chronicle of Higher Education and American Public Media's Marketplace, "The Role of Higher Education in Career Development: Employer Perceptions," Washington, DC: 2012

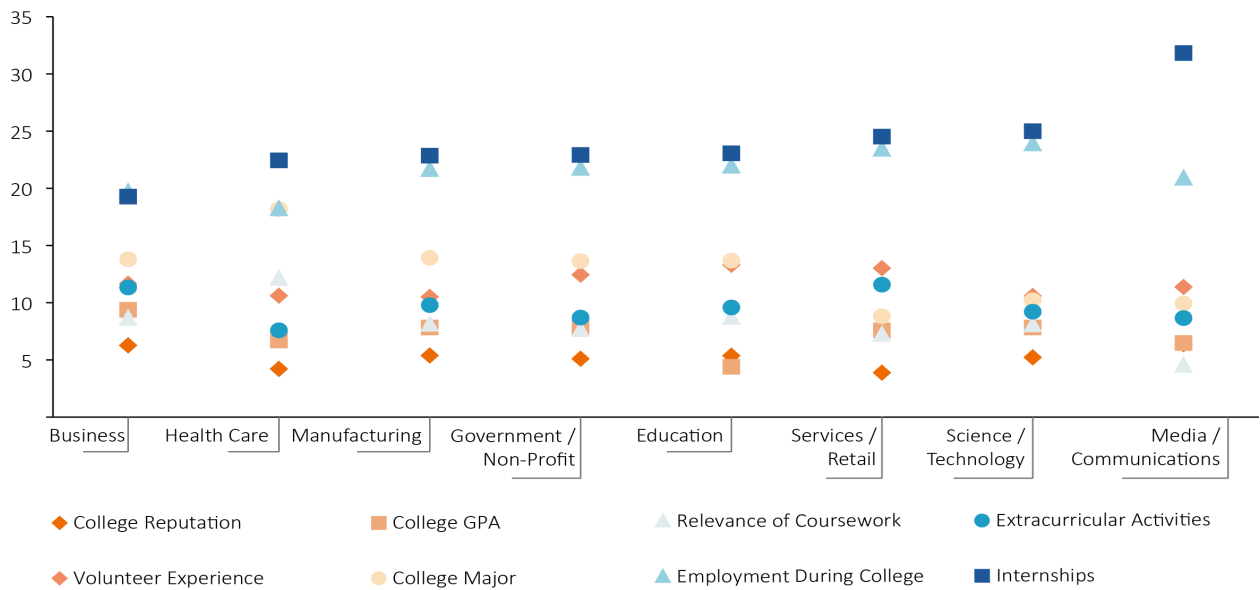
What Employers Want



Chronicle of Higher Education

Looking at the same data by industry shows the same is true regardless of industry, however the relative importance of other factors can differ. In the case of healthcare for example, college major, volunteer experience and relevance of coursework rank highest following internship experience.

Relative Importance of Attributes in Evaluating Graduates for Hire by Industry



Chronicle of Higher Education

According to the Centre for Health Innovation and Leadership, “in comparison to the US, Canada has proportionately fewer managerial employees with business degrees and a much shallower pool of technology executives.”³ Since 2009, OBIO has consistently identified the lack of industry-ready talent as a weakness limiting Ontario’s healthcare industry’s ability to commercialize and export technology. Most recently OBIO’s 2016 report on our consultation with senior healthcare executives noted that Ontario health science companies had difficulty hiring suitable candidates with the management skills they required and that cash strapped SMEs have difficulty developing such managers in house.⁴

H2BB responds to a need for business trained interns expressed by 96% of company CEOs in a recent survey consultation. While both the Ontario and federal governments invest significantly in internships and co-op opportunities for youth, OBIO determined that internship opportunities in the health science industry were focused on research and science placements and not on the business of the companies.

This is consistent with some overall statistics from a 2015 study that showed that while 18% of college students graduate with degrees in business, business internships are only 8% of the internship market.⁵

H2BB has been designed with key features that distinguish it from other programs and offers both interns and the companies that hire them greater chances for successful outcomes. These include workshops designed to expand beyond course work, subject matter industry experts as assigned advisors, and resources including market databases and a team of OBIO staff to help navigate the processes and provide support.

In the summer of 2017, OBIO conducted on-line surveys and individual interviews with H2BB interns, company supervisors and advisors. The purpose was to monitor progress, understand strengths and to identify additional areas of need and opportunity. This report includes the findings of this work with key learnings and recommendations for the program in the future.

3. Snowdon A., Zur R., Shell J. (2011) Transforming Canada into a Global Centre for Medical Device Innovation and Adoption. page 20. (accessed 8-Sep-2017). Available from: http://sites.ivey.ca/healthinnovation/files/2011/06/ICHIL_Medical_Devices_White_Paper_FINAL2.pdf

4. OBIO (2016) How Canada should be Engaging in a \$9 Trillion Dollar Health Economy. page 27 and 35. (Accessed 9-Sep-2017). Available from <http://www.OBIO.ca/publications-1/2016/4/how-canada-should-be-engaging-in-a9-trillion-dollar-health-economy>

5. Burning Glass Technologies, “No Experience Necessary? The State of American Internships, 2015”

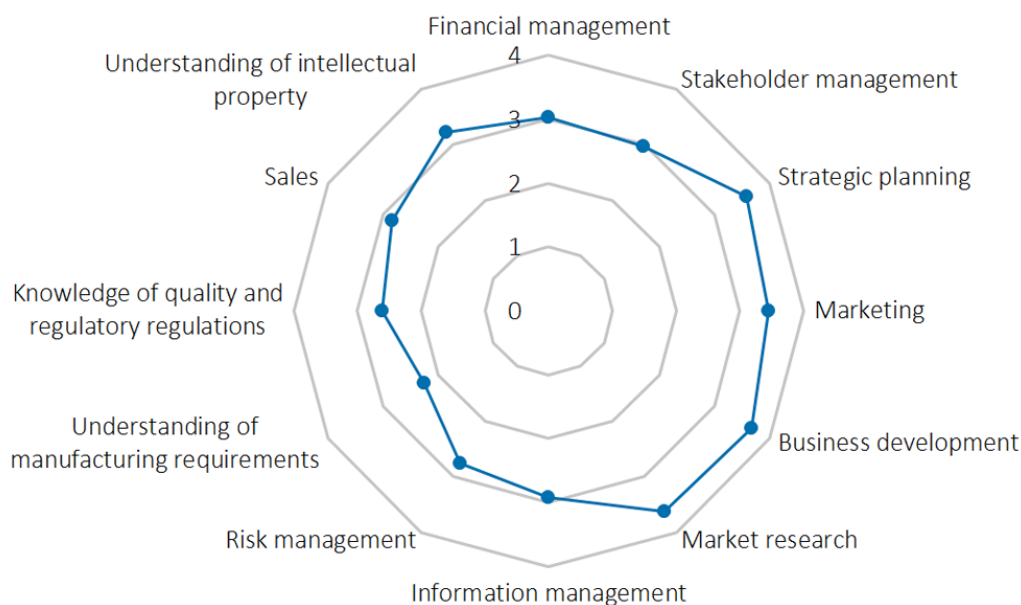
INTERNS*

H2BB interns were mainly students at the Masters level. There was one PhD and a couple of undergraduates. Seventy three percent of interns found placements in companies or not-for-profits with under 50 employees, reflecting the demographic of the industry in Ontario and confirming that the program is serving the need of the companies who asked for it. Similarly, only one third of the companies were at the stage of commercializing or selling their products.

Interns were asked to assess the importance of learning various skills and experiences during their H2BB internship. Based on an importance scale of one to four, business development (3.68), market research (3.62), strategic planning (3.58), marketing (3.44) and understanding intellectual property (3.22) rated highest.

As part of the H2BB support and training system, interns were provided with a series of workshops in which they could participate in-person or online, and could review the recording afterwards.

Importance of Skills and Experiences (Intern Perspective)



When asked to choose their top five most useful topics, interns selected market segmentation, competitive analysis, strategic planning, primary and secondary market research and intellectual property most often.

There was also a group of topics that were chosen at a lower but equal frequency that included financial modelling and valuation, product commercialization and healthcare marketing. A lack

* Information was gathered from participating interns (n=39), company supervisors (n=33) and advisors (n=14). The response rates for the on-line surveys were: 94%, 85% and 100% respectively.

of consensus was not unexpected since each internship involved a unique experience based on the type and stage of company, the intern's background and the work an intern was assigned. Areas that are essential to health science companies like regulatory requirements, quality and manufacturing, business planning and accessing financial support were chosen with relatively low frequencies suggesting a need for greater education about key specialties in the industry.

Overall there was a high level of satisfaction with the workshops in the program (94% agree or strongly agree) and most felt they were learning new skills that had not been taught in their academic coursework (84%) and that they were putting those skills to work to improve their performance during their internship (76%). Market research was mentioned most often as the skill that interns improved on most through the workshops. A number also mentioned improving their understanding of the industry, healthcare marketing and reimbursement.

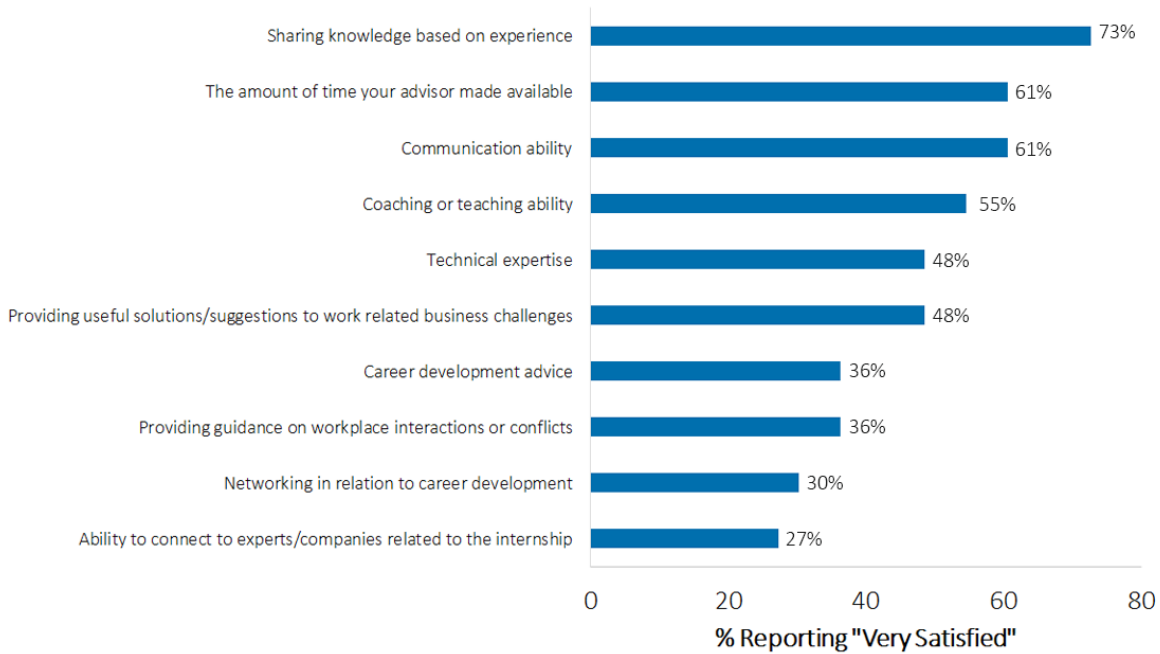
OVERALL, I WAS VERY HAPPY WITH MY H2BB WORKSHOP EXPERIENCE. THE WORKSHOPS SHIFTED MY THINKING AND MY FOCUS TO START-UPS' MOST IMPORTANT PRIORITIES, AND TO WHERE THEY NEED THE MOST SUPPORT. THIS IN TURN ALLOWED ME TO BE MORE USEFUL AND HELPFUL, AS WELL AS MAKING ME FEEL LESS LOST.

THE WORKSHOPS IMPROVED MY OVERALL KNOWLEDGE OF THE HEALTHCARE INDUSTRY AS A WHOLE AND SPECIFICALLY, THEY HELPED ME UNDERSTAND MORE ABOUT MARKET SEGMENTATION, MANUFACTURING PROCESSES, AND INTELLECTUAL PROPERTY.

Another feature of the H2BB program is the matching of each intern with a subject matter expert advisor with hands-on industry experience. Interns were surveyed on the frequency of their discussions and how helpful they found this part of the program. The majority were in contact with their advisor every two weeks or more frequently in some cases, and they were either satisfied or very satisfied on all measures tested.

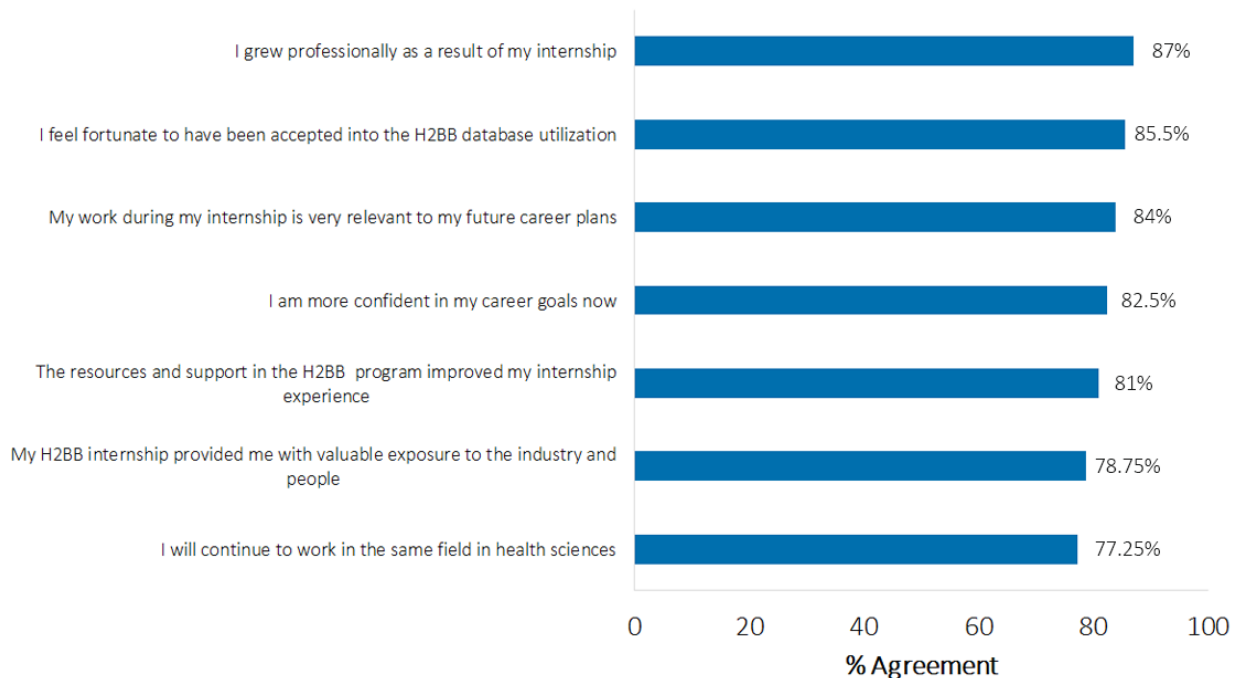
A rating of 'very satisfied' was given most often for: sharing knowledge based on experience, communication ability, the amount of time advisors made available, and coaching or teaching ability.

Intern Satisfaction with H2BB Advisor Support



Satisfaction was also measured through a series of statements about the H2BB program that the interns were asked whether or not they agreed with. Overall the statements reflected a high level of satisfaction with the program itself, a degree of interest in the industry plus relevance of the internship to career plans and confidence in career goals. All the interns agreed they had grown professionally during their H2BB internship.

Intern Agreement with H2BB Program Outcomes

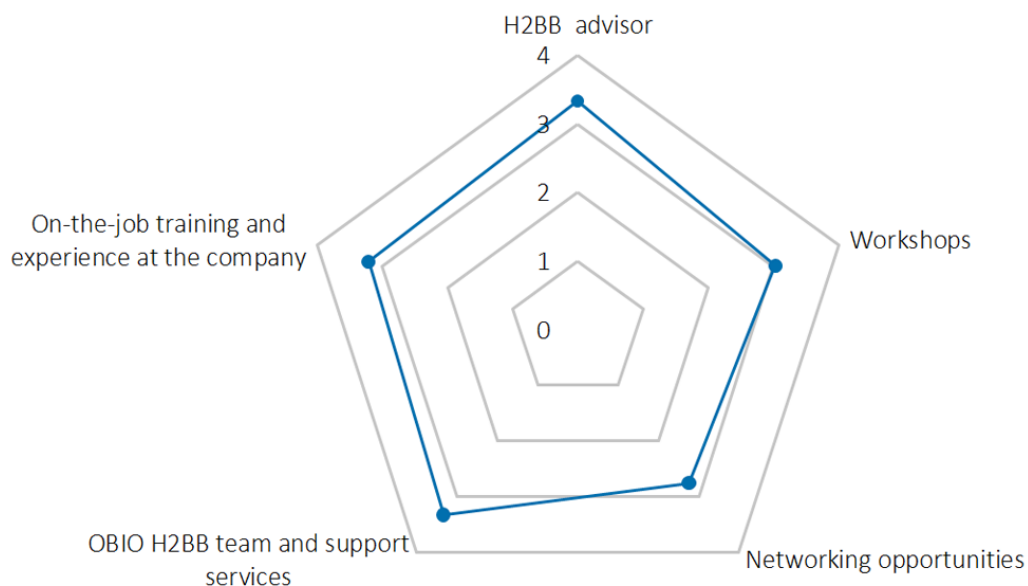


“
HAVING AN ADVISOR ALSO ALLOWED ME TO BOUNCE MY IDEAS OFF OF SOMEONE WITH EXPERIENCE, DISCUSS WHAT I AM WORKING ON AND MAKING SURE I AM ON THE RIGHT TRACK. I BUILT A GREAT RELATIONSHIP WITH MY ADVISOR THAT WILL EXTEND BEYOND H2BB.
 ”

When interns were asked about how useful the various aspects of the H2BB program were to them while doing their internship, the advisor ranked highest (3.33) on a scale of one to four, followed closely by services and support from the OBIO team, and on-the-job training.

There was 93% agreement from interns that the H2BB program improved their internship experience and 91% indicated that they would recommend H2BB to their peers, indicating a high level of satisfaction with the program.

Usefulness of H2BB Activities to Interns



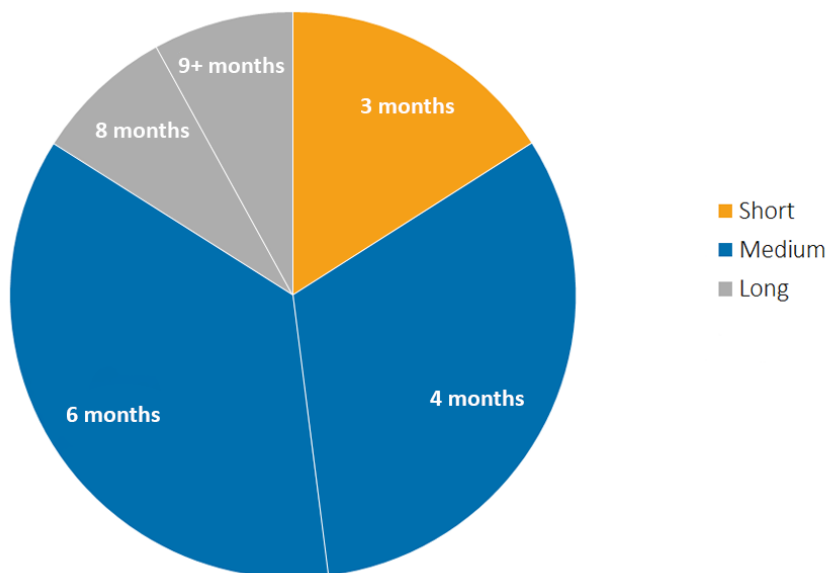
“
I WOULD ABSOLUTELY RECOMMEND H2BB AS AN INTERNSHIP PROGRAM. IT FEELS LIKE A COMMUNITY EVENT THOUGH WE WERE NOT NECESSARILY ALWAYS THERE IN PERSON. FROM THE WEEKLY EMAILS, PHONE CALLS, WORKSHOPS AND NETWORKING EVENTS, IT FELT LIKE THERE WAS A COMMUNITY THERE FOR ME.
 ”

COMPANY SUPERVISORS

The supervisors who completed the on-line survey were primarily from companies with under 50 people and half reported fewer than 10 employees. One organization reported 300 people, and a few said between 15 and 60 reflecting the nature of the businesses and the size of the companies. All but two respondents said their company had hosted interns in the past three years with a mean of eight per company although two was the most frequently mentioned number. All but one supervisor interviewed had personally supervised interns in the past (range 1 to 35).

Most said their companies' internships had a duration of three to six months and that the ideal length of an internship would be 4 (n=8/26) or 6 (n=9/26) months. Other less frequent mentions included 3, 8, 9 and 12 months.

Ideal Internship Duration



Supervisors commented that there is a talent gap in early stage companies. Manufacturing companies commented on a skilled labor shortage and experienced labor in the areas of quality management and upstream process development.

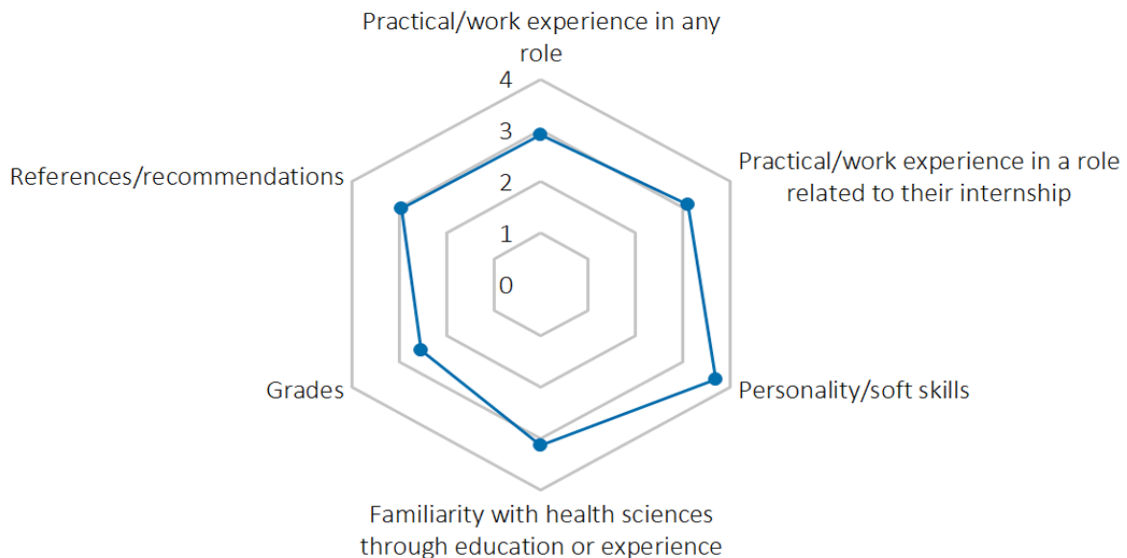
“
THE TALENT GAP FOR EARLY STAGE HEALTH SCIENCE COMPANIES IS ABSOLUTELY AN ISSUE AND H2BB IS GREAT CONTRIBUTOR TO ADDRESSING THAT TALENT GAP.
 ”

When asked about the challenges companies face when considering whether or not to participate in an internship program the main barriers were budget for salaries and supervisory resources. Company supervisors also mentioned the availability of work that matches an intern's experience.

“ THE BARRIERS CAN BE INTERNAL TO COMPANIES. IF HUMAN RESOURCES MANAGERS ARE NOT AWARE AND ARE NOT BUDGETING A YEAR IN ADVANCE IT CAN BE HARD TO GET AN INTERN. THEY ARE FOCUSED ON FULL TIME HIRES. IN OUR SITUATION, THE MARKETING MANAGER STEPPED IN TO GET A BUSINESS INTERN. GRANTS THAT COULD LOWER THE COST WOULD HELP US MAKE THESE DECISIONS. ”

Supervisors were asked to consider the importance of various aspects of an intern’s profile when deciding to hire into an internship. Personality and soft skills were rated as most important with an average score of 3.7 out of 4 followed by practical work experience in a role related to the internship (3.11) and familiarity with health sciences through education or experience (3.11) When asked to rate the importance of various business competencies when recruiting a business intern for their company, supervisors gave market research (3.35) and business development (3.00) the highest average scores out of 4.00. Information management (2.96), stakeholder engagement (2.92) and marketing (2.92) came next.

What Employers Look for in an Intern



There were differences between interns’ and company supervisors’ rankings of the importance of business competencies the most notable being the high rankings for information management and stakeholder management by supervisors versus the lower rankings by interns and the high rankings for intellectual property and strategic planning by interns versus the lower rankings by supervisors. Supervisors also suggested that communications and project management would be helpful for business interns to have.

The largest gap between the rankings of importance and satisfaction with interns’ performances was in the area of business development. Supervisors were most satisfied with stakeholder engagement, market research and information management. For many of the competencies tested, the high

BRIDGING THE TALENT GAP

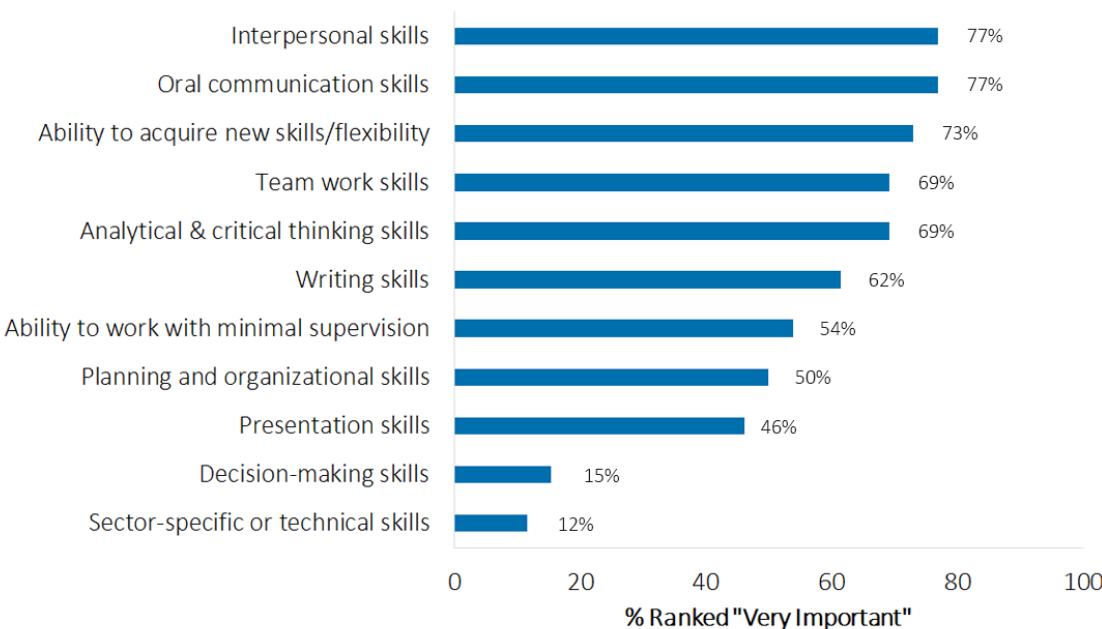
percentage of N/A responses reflects the variability of assignments across companies. Most of the interns could be evaluated by their supervisors on market research and marketing and there were no significant gaps between importance and satisfaction. Around stakeholder management, satisfaction outweighed importance.

COMPARATIVE RANKING OF THE IMPORTANCE OF BUSINESS COMPETENCIES		
COMPETENCY	COMPANY SUPERVISORS	INTERNS
Market Research	1	3
Business Development	2	1
Information Management	3	8
Stakeholder Management	4.5	7
Marketing	4.5	4
Financial Modeling	6	6
Strategic Planning	7	2
Sales	8	9
Intellectual Property	9	5
QC and Regulatory	10	10
Manufacturing	11	11

In addition to competencies, supervisors were asked about the importance of specific skills when recruiting business interns for their companies. The top two were oral communication and interpersonal skills. Teamwork, analytical and critical thinking and the flexibility to acquire new skills were tied for third place.

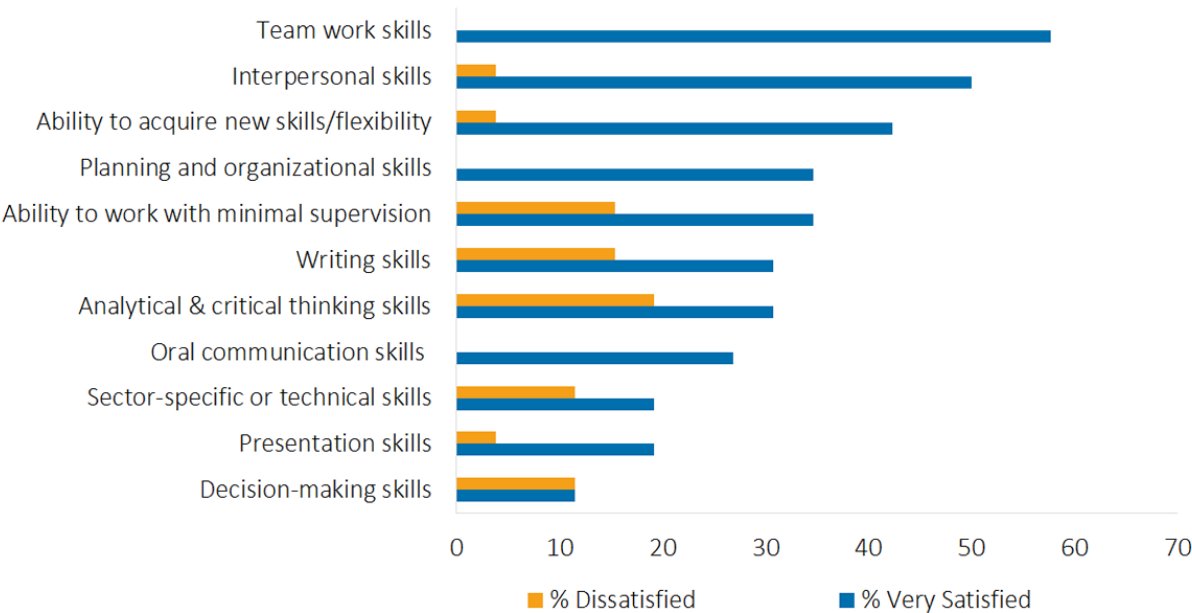
RANKING OF IMPORTANCE VS SATISFACTION OF INTERNS' BUSINESS COMPETENCIES			
COMPETENCY	IMPORTANCE	SATISFACTION	N/A%
Market Research	1	2.5	15
Business Development	2	4.5	27
Information Management	3	2.5	27
Stakeholder Management	4.5	1	31
Marketing	4.5	4.5	19
Financial Modeling	6	6	50
Strategic Planning	7	9	42
Sales	8	7	62
Intellectual Property	9	8	6 5
QC and Regulatory	10	10	73
Manufacturing	11	11	77

Importance of Intern Skills to Employers



Supervisors exhibited the highest level of satisfaction with their interns on team work and interpersonal skills and the highest dissatisfaction on analytical and critical thinking (22%) and writing skills (19%). Oral communication was ranked number one in importance however only 26%

Supervisor Satisfaction with Interns' Skills

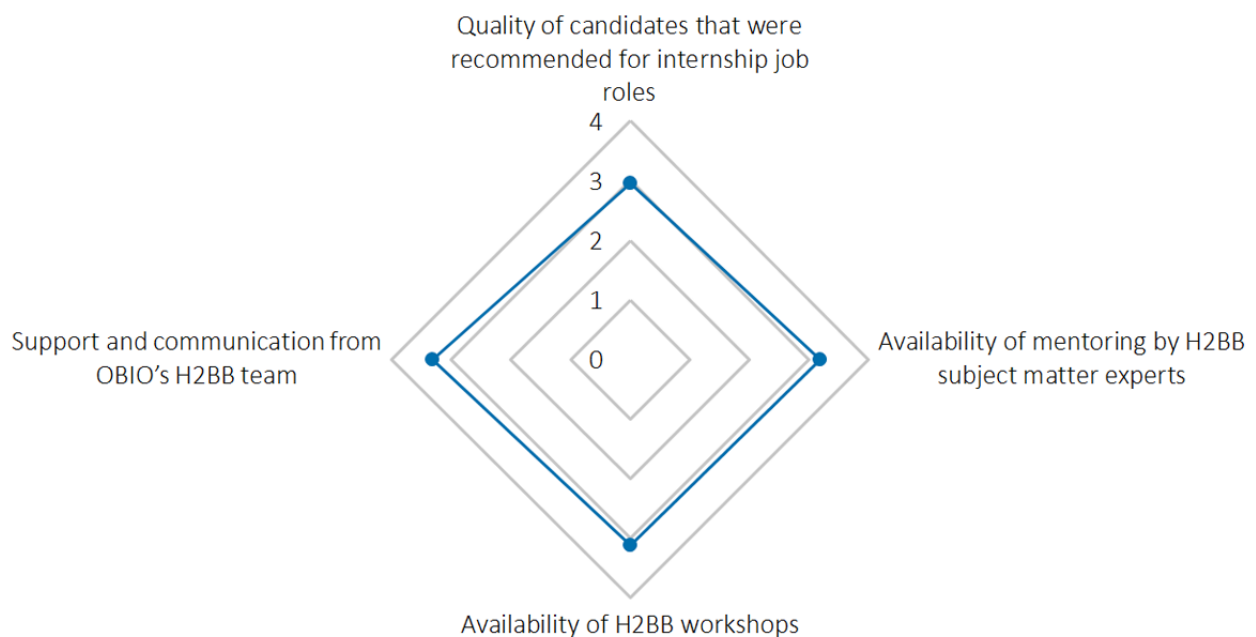


BRIDGING THE TALENT GAP

of supervisors were very satisfied with their intern on this measure signifying an important gap. Teamwork was the only measure for which more than half (56%) of the supervisors said they were very satisfied. Fewer than half were very satisfied with the important skills flexibility and the ability to acquire new skills (41%), analytical thinking (30%) and writing skills (30%).

When supervisors were asked to think specifically about the H2BB program and its attributes, there was a high degree of satisfaction overall particularly with the OBIO team and the support they were given.

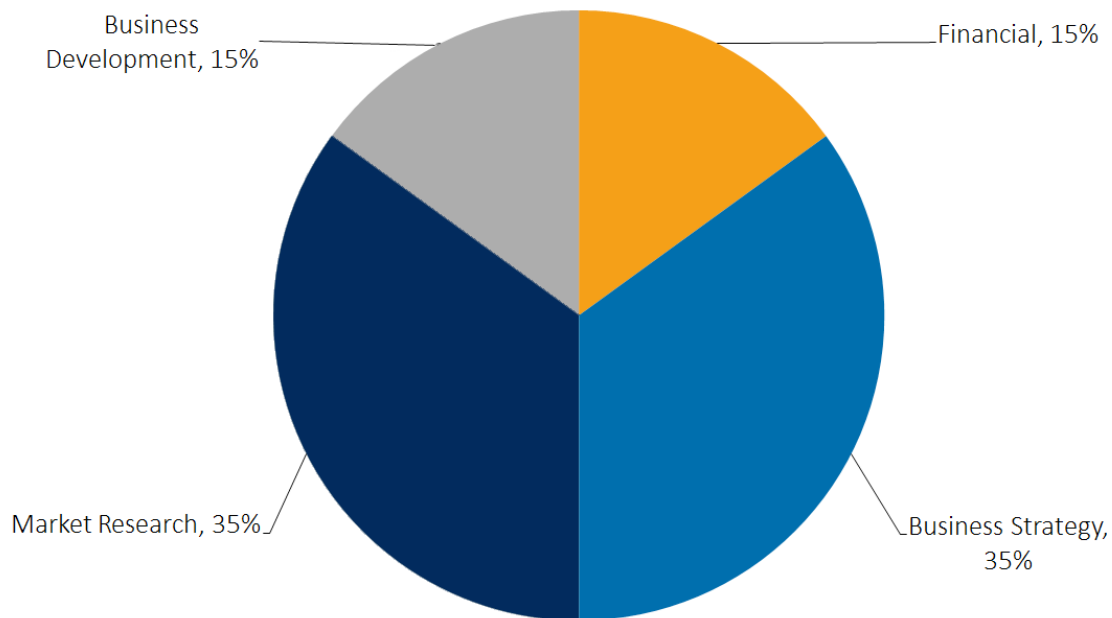
Satisfaction with H2BB Program Components



“
I KNOW THAT OUR INTERN REALLY TOOK ADVANTAGE OF UTILIZING OBIO'S ACCESS TO INVESTOR DATABASES. SHE WAS ABLE TO DIG UP ONE MARKET REPORT WHICH HAD A HUGE DISCREPANCY IN TERMS OF MARKET VALUATION WHICH WAS A REAL OPPORTUNITY FOR OUR COMPANY.
”

Three quarters of the supervisors said they were familiar with the H2BB workshops and 80% said the workshops were important to the performance of the intern at their company. Close to 90% felt the workshops were important to the value of the H2BB program overall. The supervisors had a wide range of opinions on which H2BB workshop topics would be most useful for improving interns' skills in the health innovation sector but the most frequent mentions included: market research, competitive analysis, product commercialization and healthcare marketing.

Workshop Topics



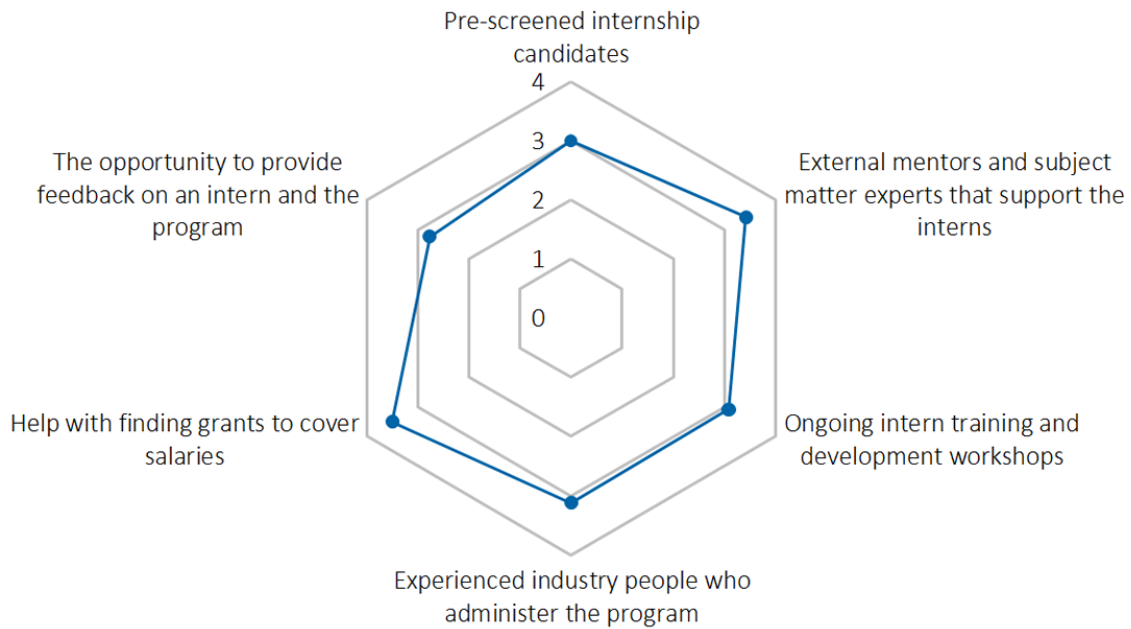
I WAS VERY IMPRESSED BY THE H2BB WORKSHOPS. IT IS PHENOMENAL TO OFFER THESE TO INTERNS. THEY ARE GETTING PAID OPPORTUNITIES WHILE HAVING CONTINUING EDUCATION OPPORTUNITIES AVAILABLE TO THEM THAT ARE RELEVANT TO THEIR WORKPLACE EXPERIENCES. THE NETWORKING COMPONENT IS ALSO A GREAT OPPORTUNITY FOR THEM.

Three quarters of the supervisors indicated they and their company would participate again in H2BB and continue as a program partner. The remainder said they were unsure at the time of the survey.

WE ARE AT THE POINT NOW WHERE OUR COMPANY IS GOING TO HAVE UP TO HAVE FIVE INTERNS OR CO-OP STUDENTS GOING THROUGH THE H2BB PROGRAM IN 2018.

Help with finding grants to support intern salaries (62% very valuable) and the availability of external mentors in the program (46% very valuable) were rated the most valuable features of H2BB.

Value of H2BB Program Components



“
THE H2BB PROGRAM HELPED OUR COMPANY EVEN PRIOR TO OUR HIRE, THROUGH THE SOURCING OF CANDIDATES. IT GAVE US AN OPPORTUNITY TO FIND CANDIDATES WHO WE WOULDN'T OTHERWISE HAVE FOUND.

“
THE H2BB PROGRAM WAS VERY BENEFICIAL FOR US BECAUSE IT HELPED LOWER THE RISK THRESHOLD FOR HIRING SOMEONE.

The supervisors also had suggestions for academic institutions. Many were related to the idea of real world experiences. There were comments on healthcare sales and marketing and the need for greater understanding of the market place, and the idea that academia should work more closely with industry. In addition, there were a number of references to improving “soft” skills.

“
IT'S IMPORTANT TO STRENGTHEN STUDENTS' INTERPERSONAL SKILLS, PROJECT MANAGEMENT SKILLS, AND CRITICAL THINKING SKILLS.

ADVISORS

At the time of the survey there were 14 external advisors acting as mentors to the 39 interns. Half had previous experience mentoring university students or interns. Meetings or other contacts occurred monthly or more frequently for about half and the remainder stated the scheduling was variable depending on the project need and how organized or available the intern was. The recommended optimal frequency was weekly or every 1-2 weeks and several qualified that by saying it would depend on the nature of the work and challenges the intern was facing but not less frequently than every two weeks with phone and email contact as needed. Advisors reported that on average meetings lasted an hour (range 15 to 120 minutes).

“
I SPOKE TO MY INTERN WEEKLY. IT PROVIDED A REGULAR TOUCHPOINT AND HELPED BUILD THE RELATIONSHIP WITH THE INTERN BY LETTING THEM KNOW I WAS THERE TO HELP THEM, AND TO ENCOURAGE THEM TO BRING THEIR QUESTIONS TO ME.
 ”

All the advisors felt they had been able to help their assigned interns be successful during their internships. Specific mentions included coaching on how to approach projects or problems, soft skills and career advice.

“
EVERY WEEK OR EVERY OTHER WEEK, I TALKED TO MY INTERN. THE FREQUENCY OF THE CONVERSATIONS WAS COMMENSURATE WITH WHAT THE INTERN NEEDED FROM ME AND FOR THEIR WORK PLACEMENT.
 ”

About half of the advisors said the interns made good use of their time and expertise. The most common concerns among the remainder related to the intern’s lack of time, organization or follow up and to the clarity from the company and the intern on what specific projects to work on.

“
MY INTERN WAS ON THE RIGHT TRACK BUT THE INTERACTION WITH ME GAVE HIM SOME CONFIDENCE, AND I WAS ABLE TO LET HIM THINK THROUGH ALTERNATIVE APPROACHES.
 ”

Advisors were asked about the types of things they did to help their interns succeed during their H2BB internship. Sharing insights about ways of doing things in other companies and providing technical advice was mentioned twelve times, and working to increase workplace preparedness was mentioned ten times.

Spontaneous mentions included career advice and less technical aspects of the intern’s project.

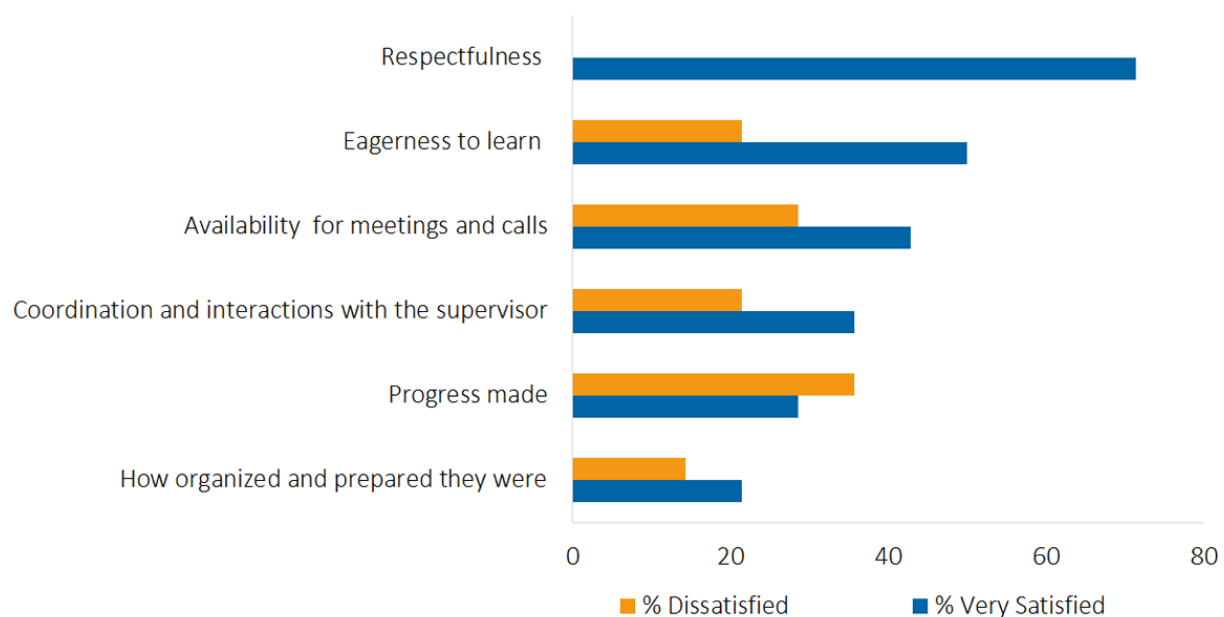
ADVISOR ACTIVITIES WITH INTERNS	# OF MENTIONS
Provide technical skills or advice	12
Provide insight into how activities are done at other organizations	12
Provide an understanding of industry expectations and increase workplace preparedness	10
Provide sources of information (databases, websites, literature)	9
Provide guidance related to workplace personnel interactions and conflicts	6

“
I PROVIDED INSIGHT INTO THE PRACTICAL SIDE OF THE PROJECT THEY WERE WORKING ON, AND WAS ABLE TO ADD INSIGHT THAT THERE IS ART AND SCIENCE INVOLVED IN MANAGING A PROJECT WHICH COMES FROM EXPERIENCE.
 ”

When asked specifically about counselling interns on career choices, advisors focused mainly on increasing industry knowledge (14/14) and building confidence in choices (7/14). Two said they helped with resumes.

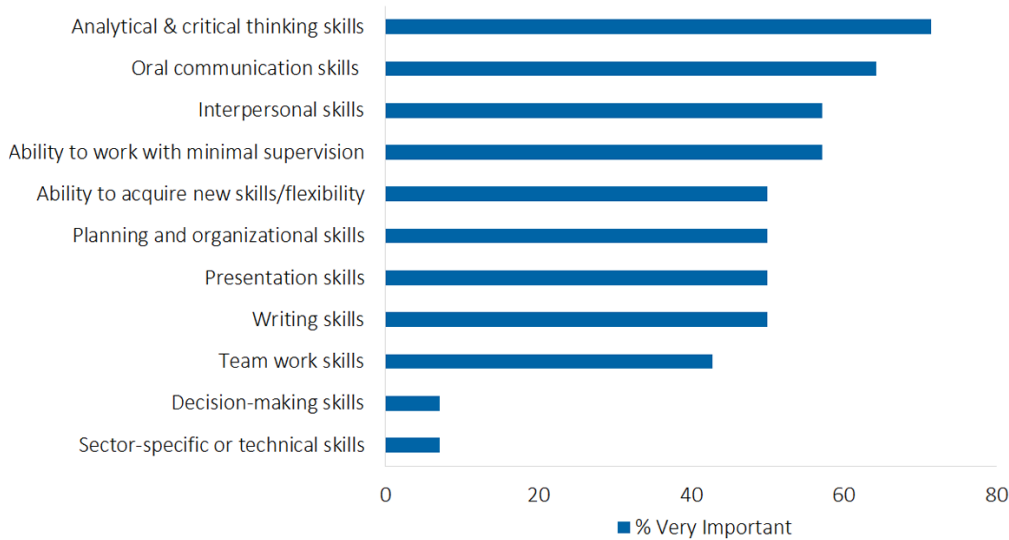
Advisors were satisfied with their interns overall, particularly in the areas of respectfulness (71% very satisfied) and eagerness to learn (50% very satisfied). None was dissatisfied with the interns’ levels of education however only one third gave the interns a “very satisfied” rating on this measure. Advisors were most often dissatisfied with their interns’ levels of progress, preparedness for meetings and availability for meetings.

Advisor Satisfaction with Interns



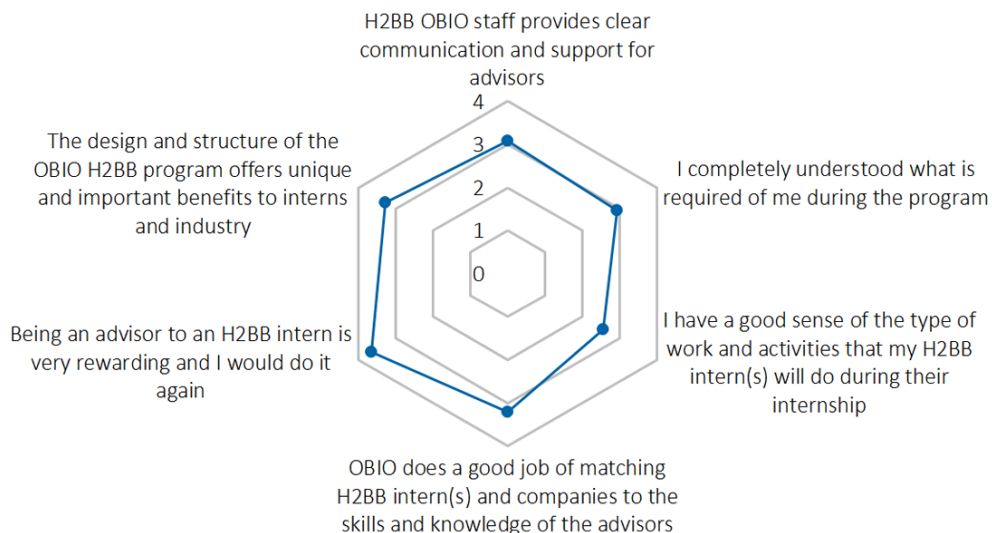
Advisors were asked to rate the importance of the same skill set as the company supervisors. The top three skill sets for the advisors were analytical thinking, oral communication and interpersonal skills. By comparison the top 3 for supervisors were oral communication, interpersonal skills and the flexibility to acquire new skills.

Importance of Intern Skills to Advisors



Finally, advisors were asked about the H2BB program overall. Almost all felt that the H2BB program offers unique and important benefits to interns and that they would be an advisor again if asked. OBIO was also seen as doing a good job of matching interns to advisors. Areas of opportunity include finding ways to close the loop among interns, company supervisors and advisors so the advisor has a more in-depth understanding of what the intern is doing and continuing to strengthen communications and manage expectations.

Advisor Assessment of H2BB Program Qualities



DISCUSSION

The design and implementation of OBIO's H2BB internship program has taken place against a backdrop of debate about Canada's ability to compete in the global knowledge economies, the supply or lack of talent and the upcoming shift in the nature of work driven by technology.

A recent report by the Brookfield Institute looked at the rapid pace of technological change and its influence on the job market.⁶ While the report focuses on the advantages and necessity of preparing Canada's workforce for the jobs of the future, it also provides some details on what job seekers need to know and some of the ways to acquire necessary skills.

- "While youth are always the cornerstone of a country's future workforce, the rapid pace of technology-driven change makes the task of effectively integrating them into the labour force more challenging—and more critical—than ever before. Failure to do so will not only inhibit Canada's economic growth, but may result in a large swath of the population being left behind in the knowledge economy."
- "Youth will need to be equipped with a broad suite of technical and soft skills, including skills associated with digital literacy, entrepreneurship, and social intelligence."
- "The pace of change will also increase the value of those who are able to take risks, manage uncertainty and adjust rapidly. In other words, entrepreneurial skills will grow in importance, not just for startups but for all Canadian firms. Successful entrepreneurs have many of the skills necessary for the future of work. Research suggests that entrepreneurs score above the average in terms of persuasion, leadership, personal accountability, goal orientation and interpersonal interaction."

A 2015 study by McKinsey provides additional colour:⁷

- "Canada's system is producing the right number and types of graduates compared to other countries. In general, Canadian employers in specific sectors think there are adequate numbers of graduates. Further, Canada's youth find employment faster than those in most of the other countries we surveyed."
- "There is a fundamental disagreement about the quality of Canada's graduates. The vast majority of our educators (84%) believe they are graduating high performers – yet more than half of Canada's employers (66%) believe new graduates are unprepared for the labour force, as do most youth (56%)."

6. Brookfield Institute, Future Proof: Preparing Young Canadians for the Future of Work, 2017

7. McKinsey & Company, Youth in Transition, 2015

- “Certain groups within the youth population face serious barriers, even when they have post-secondary qualifications. They are minorities, those whose parents had lower education levels, and those in the liberal arts fields.”

The McKinsey report also comments on poor communication between stakeholders and differing priorities of educators as areas contributing to workplace preparedness of Canadian graduates. Only half of the youth reported access to a non-academic counsellor, Canadian employers ranked 7th out of 7 nationalities in the frequency of interactions with education providers. Further, Canadian universities ranked helping students find employment and partnering with companies as 8th and 9th on a list of priorities compared with US rankings of 4th.

A number of studies have looked at gaps between what employers are looking for and what is available among new graduates. The largest gaps are often in the categories of experience and soft skills and while the authors of the Brookfield report suggest that there is a need for employers to increase training programs that are relevant to the workplace and complement formal education, they cite statistics that show investment in employee training in Canada declined by 40% in a 10-year period to 2013.

- “ Given the increasingly complex set of skill requirements for jobs across the economy, it is not surprising that formal education alone cannot equip youth with all that they need to be successful. Recent graduates face the paradox of needing experience to get a job and needing a job to get experience. Despite possessing relevant hard skills, they often lack the soft skills and work experience that employers are seeking.”

Economies around the world are trying a number of approaches to bridging these gaps in order to develop talent and secure their workforces of the future. The Business Council of Canada looked at partnering between large companies and academic institutions and found that 76% of large companies participate in some form of a collaboration to formally develop talent. The majority of these collaborations are co-ops and paid internships, however there is no mention of the health science industry.⁸

- “ Partnerships are most common among companies in the transportation, mining/minerals, IT/telecom, and financial sectors, and typically involve co-op and internship programs. The financial sector is most involved in curriculum/program development, while the mining/materials sector is most engaged in classroom instruction, which includes professionals working as expert speakers. Companies in the energy/utilities/construction sector are most engaged in apprenticeship programs.”

8. Business Council of Canada, March 2016. “Developing Canada’s future workforce: a survey of large private-sector employers.”

BRIDGING THE TALENT GAP

- “Although a strong majority of respondents have formal partnerships with post-secondary institutions, more is needed. Amongst our closest trading partners, business-higher education partnerships are more firmly established and have a stronger strategic focus.” “Canadian firms and institutions should consider these as partnership models that could ease school-to-work transitions and provide needed talent pipelines.”

The study found that 62% of employers required one or more years of relevant experience for entry level hires and that internships and co-ops were valued as experiential tools, and that hiring through this route has increased in recent years.

- “Perhaps most encouraging for recent graduates, respondents noted that co-op programs and other forms of work-integrated learning are among the most important sources of relevant work experience, a point that should be emphasized to those preparing resumes. Work-integrated learning provides recruiters with important references and the assurance that an applicant has the workplace skills to hit the ground running. Overall, the percentage of entry-level employees hired directly through work-integrated learning programs has increased since the 2013 survey.”

This study of large employers differed slightly from some of the other research in the area in that they were more satisfied with workplace preparedness of recent graduates and invested more in on the job training highlighting the need to consider sector and company size when identifying opportunities and planning interventions. Some of the priorities, gaps and challenges were similar however and skills associated with team work, communication, problem solving and people were most important at the entry level. Skills associated with leadership were most important to mid-level hires and the greatest challenge for companies.

The findings of the current research demonstrate a high level of satisfaction with a new, unique internship program designed to place business focused students into relevant functions in the health science industry in Ontario. The nature of the program and its structure have the potential to address a number of gaps that were highlighted in other reports while being specific to a sector where less is known. The program is managed by OBIO, an independent, well informed third party that has evaluated industry needs over time, brought key stakeholders to the table to coordinate efforts and has engaged in ongoing evaluations of the program itself. The report findings illustrate benefits to industry, interns, academia and government and identify areas of opportunity and best practices to focus on.

KEY LEARNINGS

LEARNINGS FOR INDUSTRY

- A key benefit of developing and implementing OBIO's H2BB program has been to raise the level of awareness of the health science industry in Ontario with students and recent graduates. The program itself has allowed companies to access much needed business resources and has demonstrated value in furthering commercialization efforts. Data suggest that increased awareness may translate into intention to follow a career in the field.

Most Important Skills and Capabilities



- In order to benefit from an internship program and attract high performing individuals, companies need to include these positions in their HR planning cycles and budgets so that hiring can match the academic year, decision time frames can be shortened and companies can quickly make firm commitments to the people they want.
- Companies that can identify projects, assign supervisors and work closely with OBIO and the H2BB advisors will derive the most value from their interns.
- Companies have a valuable role to play in attracting and developing talent. Working with and through OBIO and the H2BB program, industry can help build awareness and community, identify needs and partner with other stakeholders to ensure there is a talent pool for growth and success.

LEARNINGS FOR INTERNS

- The health science industry offers unique and exciting, knowledge sector jobs where graduates can use their business skills to build successful commercial health science companies.
- Not all internships are the same. The H2BB internship has been carefully designed by industry experts to meet the needs of companies, train future employees and create a community. Interns acquire relevant skills, networks and in-depth training as part of the program.
- Industry has expressed a need for greater communication, interpersonal and critical thinking skills among the interns they employ. In addition, there is a demand for flexibility and the ability to acquire new skills. H2BB has provided mentorship and coaching to accelerate real world learning of these and other skills and OBIO has the necessary contacts to support intern development for those who engage.

LEARNINGS FOR ACADEMIC PARTNERS

- There is an opportunity for academic institutions to attract students, improve post-graduation employment statistics and enhance the quality of their business programs by working with industry and third party experts to design and deliver internship placements. Creating an internship program that delivers workplace ready graduates requires an understanding of needs, the expertise of multiple stakeholders, effective coordination and clear communication. OBIO is a credible third party with first-hand industry knowledge and wide reach throughout the health science ecosystem. Partnering with industry through OBIO will drive quality and successful outcomes for business programs in the healthcare arena.
- There are consistent findings that while employers place high value on soft skills, recent graduates and interns often under perform in key areas despite classroom and team based learning. In the face of e-learning, remote learning and the difficulties with teaching and evaluating performance on soft skills in an academic setting, this situation is unlikely to improve. Real world, day-to-day experience in the environment where the skills are used coupled with individualized coaching is necessary to improve performance in these areas. Placing interns through career centres with no additional coaching or community has failed to address these gaps. OBIO's H2BB internship program meets this critical need and benefits both institutions and students.
- Industry viewed work experience and personality as most important when reviewing intern candidates. Market research was the most highly ranked business competency that companies were looking for. Interns over emphasized the importance of strategic planning and were not well aligned in their understanding of what these employers might want. There is an opportunity for academic institutions to work more closely with OBIO and industry to correct students' understanding and re-balance priorities.

- In order to attract industry partners, academic institutions must work with OBIO to build awareness of the opportunity and collect applications for internships early in the school session to allow time for planning, budgeting, interviewing and hiring.
- An unexpected benefit of the H2BB program that was expressed by interns was that OBIO's H2BB creates a sense of community whereas they had been alone and somewhat isolated in their other internships. This sense of community was considered important for the support it offered, growth of future networks, and overall confidence and well being.

LEARNINGS FOR GOVERNMENT

- From all accounts, OBIO's H2BB business internship is unique in Ontario and possibly Canada. The uniqueness is characterized by the engagement of subject matter expert advisors to mentor the intern throughout their internship and coach them to be successful and deliver value to the company they are placed in. Specially designed workshops augment academic learning and bring a healthcare industry perspective to general skills. The program was also seen as superior to other internships on delivering what is promised to the interns themselves.
- OBIO's H2BB program fills a documented need to attract and develop talent and business skills in the health science industry. The placement of interns from business schools into companies fills a gap that has not been addressed by teaching business to scientists. It also addresses deficiencies in soft skills as interns interact daily within a company environment receiving constant feedback while at the same time receiving mentoring and coaching from industry experts. The program represents a key part of a solution to the talent gap.
- OBIO is a credible third party with deep expertise and connections in industry. This is necessary to the success of a business internship program. Interns need non-academic advisors and a credible third party can anticipate needs and opportunities in industry and bring stakeholders together to deliver a successful program. A credible third party brings its own relationships to the program to deliver quality mentorships and ongoing intern training.
- Industry operates on budgets and planning cycles that are distinct from both the academic year and government granting schedules. There is a limited degree of flexibility in the amount of time needed to plan for, interview, budget for and hire an intern. Government has to recognize that funding must be confirmed in a timely way and cover at least 2 years to help industry plan to hire. The health science industry is a key component of the tech and knowledge industry sectors that has the potential to create high paying jobs for the province that are not easily moved to other jurisdictions. Efforts to develop talent have focused primarily on placing scientists and the industry has struggled with commercialization. OBIO's H2BB program offers an important solution to building business talent and pulling high performing graduates into the health science industry with the skills required for commercial success.

RECOMMENDATIONS

1. Government and academia should continue to partner with OBIO to deliver the H2BB health science business internship program.
2. OBIO should develop a module on building awareness of and addressing soft skill deficits.
3. OBIO should work with government, academia and industry to coordinate planning and budgeting cycles so that H2BB can place qualified and motivated business interns in a timely fashion.
4. OBIO should be supported to expand on the number and types of events or services that build the sense of community.
5. The mentorship part of the program should be expanded to increase student's access to non-academic advisors.
6. OBIO should be supported to develop a process for increasing the engagement of the health science industry with education providers in order to improve alignment of priorities and student development.
7. OBIO should continue to build awareness of the program among health science companies and academic partners to continue to pull business talent into industry and develop it.



ONTARIO BIOSCIENCE INNOVATION ORGANIZATION
100 COLLEGE ST., SUITE 213
TORONTO, ONTARIO | M5G 1L5, CANADA
OBIO.CA