COVE
Workforce Initiative

Project-Based Work-Integrated Learning:
Engaging Youth in Ocean Industries of the 21st Century

PROGRAM EFFECTIVENESS REPORT: Examining the efficacy of the COVE Ocean Internship Program in a virtual world

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Introduction

In May 2020 we launched our COVE Internship pilot on time and with 100% participation from Interns and companies - all in the face of the COVID-19 pandemic and the gathering restrictions it had imposed. In order to do so we quickly adapted our orientation and training programs, as well as the Internship projects themselves, to an online and virtual model. This Internship pilot was already a **unique model** that included;

- Multi-disciplinary cohorts,
- Project-based WIL (work integrated learning),
- Peer-to-peer learning,
- Dedicated senior Mentoring,
- and sprint projects,

These variables were combined with the objectives of attracting a more diverse candidate to the industry, building future skills and competencies, and raising awareness of the range of blue economy careers available to youth.

Diversity and Inclusion are central to our mandate for workforce development in the national marine industry.

Engaging under-represented workers is a key objective of our research and program development, and thus were key objectives and success metrics of the program. The COVE Internship Pilot intended to demonstrate that strategic hiring for diversity can have a positive impact on the industry by;

1. Growing diversity of the workforce.
2. Accelerating growth and innovation by introducing new entrants with diverse perspectives, education and experience into an increasingly collaborative environment.
3. Building networks and allies of under-represented workers within the industry.
4. Socializing employers to the benefits of a more diverse workforce.

2020 cohort of interns for the Pilot Internship, from left to right: Emma Fudge, Silas Silva, Vijay Ayyannamahanty, Paul Guardia, Holly McLeod., James Morris, Alvaro Sevillaa, Ellis Keener, Joshua Awe, Katrina Tomas

Context

This report summarizes the feedback from three key stakeholder groups who participated in this pilot; the ***Interns***, the Host companies with whom the Interns worked for their 7-8 week sprint projects (referred to in this report as the ***Hosts***), and the ***Mentors***, who provided volunteer support to each interdisciplinary team on their respective sprint projects.

Quick Stat

4 Mentors
8 Companies
10 Interns

COVID-19 presented a unique challenge to running an Internship project, yet the opportunities for building key future skills like resilience, adaptability, virtual collaboration and more were undeniable. This Internship, already novel in so many ways, became itself an example of resilience and recovery as we pushed forward and found creative ways to proceed virtually and remotely in an industry that is very traditional and workplace-based. Insights from this pilot can help inform the development of future Internship programs, to have greater impact and wider reach, and can help inform the best-practices for the future of work where that work is simultaneously increasingly collaborative and increasingly virtual.

The COVE Internship program was launched with several ambitious objectives in mind, including;

1. High-quality career building experience that has academic and experiential benefit for youth
2. Meaningful WIL experience for Interns and Hosts alike, that benefits the local industry, increases awareness of the broader range of talent, and facilitates workforce recruitment and retention.
3. Reaching a more diverse range of students, (with diversity relating to racial/cultural, gender, education, age, experience;)
4. Elevating awareness of career options across the ocean technology industry and the Canadian Blue Economy;
5. Applying an innovative approach to recruitment and selection of intern candidates;

Summary of Key Features of the Ocean Internship Program: Anticipated Benefits and Outcomes of the Internship

Diversity Strategy Interdisciplinary Cohort

Access to a broader range of diverse talent

Hosts will have first access to top talent in the region and a chance to 'try out' a non-traditional hire (e.g. non-engineering, non-ocean STEM; racial/cultural/gender/age diversity)

Provide access to under-represented workers who might not otherwise consider our industry; or who might not otherwise find a point of entry into the industry

Implement an explicit strategy that prioritizes recruitment of diverse, qualified talent

Peer-to-Peer Learning

COVE deployed multi-disciplinary groups of students to participating businesses for project-based learning

The multi-disciplinarity of the teams meant our Interns were exposed to peers who brought very different backgrounds, perspectives and ideas.

The intention was to create the conditions where Interns can develop a more integrated understanding of the issue, the opportunity and the range of potential approaches

Orientation: Pre-deployment Training and Development

COVE provided upfront workplace readiness training (including safety training, industry orientation, workplace skills, project preparation, project management and consulting, and Design Thinking)

The mandatory orientation program was implemented virtually (due to Covid) during the first week of the Internship program, and involved 35 hours of instructor-led, Mentor-led, supervisor-led, or team-led learning

The orientation week was designed to reduce the on-boarding burden for Hosts and minimize the non-productive time on the job

Continuous Mentorship/ Program Management

COVE assigned each project team a senior industry Mentor who met with them weekly throughout the project for ongoing guidance, project management support and technical support

COVE provided weekly supervision from the Manager of Learning Programs

Hosts provided weekly (or more often) supervision and Mentoring from an in-house supervisor

Interns tracked progress in weekly progress reports that were submitted to the COVE management team for review

Project-Based WIL/ Host Companies

Participating companies (Hosts) submitted a project proposal prior to acceptance into the program as a Host.

Projects were sprint, with scope and objectives that could be completed within 7-8 weeks.

Project-based learning (PBL) offered a broader range of practical experiences, and provided an opportunity to work on a project from start to finish

Created an opportunity to undertake a project outside of the traditional co-op scope (i.e. projects didn't need to be limited to course of study of a single student)

Industry Exposure/ Network Building

Interns worked with two different companies on at least two separate sprint projects

Exposure to a variety of ocean-based industries/careers, and access to a wide network of industry Mentors and connections

It was intended that the Interns would have significant opportunities to connect with employers and members of the COVE community and of the broader ocean technology community. COVID-19 restrictions limited these opportunities, however we did create several virtual (and a few distanced, in-person) networking opportunities

Insights and Recommendations

Program Highlights:

Overall, all three participating groups were thrilled with the internship program. The components of the program that were viewed most positively were:

- Diversity of the interns themselves
- Benefits to the company of having students work on projects (PBL) versus scrambling to find tasks to keep them busy
- Initial and ongoing support from COVE
- Ability of the students to self-manage
- Flexibility of all involved to adapt to a virtual and online format.

All of the Hosts indicated that, if they were in a position to hire, they would offer a position to one or more of the interns.

Five interns (50%) were offered positions with a Host following the internship pilot.

2. Orientation and Onboarding

A robust Orientation and Onboarding program was developed and delivered by COVE with the intention of providing basic training in key workplace skills and expectations. Students were also trained in essential skills relating to design thinking, consultation, and project management – all skills that would help them to manage their respective projects more independently and effectively, and approach the PBL from a creative and critical thinking perspective.

It was noted that although an assumption was made that the Hosts would do their own (albeit shorter) orientation, it was not explicitly stated, and some hosts did not. This created some confusion, a misunderstanding of expectations early on.

Recommendation

Going forward, COVE will provide a resource summarizing the onboarding that is delivered to all interns, the expectations for all interns from COVE's perspective and outlining additional orientation that should be conducted separately by the Host.

Recommendations for Future Programs

1. Project proposal development

It became evident that the project proposals that were most robust and well-developed allowed the interns to meet expectations for timelines, milestones, scoping and deliverables. Less developed projects resulted in more confusion, scope creep, and took more time to initiate activity and engagement. Some of the projects were more engineering focused and resulted in the engineering students being able to contribute disproportionately more to the work.

Recommendation

COVE to provide more support in cultivating multi-disciplinary projects through the initial scoping stage to help to identify key competencies and technical skills for recruitment and will clearly establish the scope and parameters for the projects.

3. Additional and Ongoing training and Development

The interns enjoyed the onboarding content, but found the volume of new learning that occurred in the first week to be significant. Once the new Hosts and their projects were introduced, it became challenging to integrate so much new learning. One Intern commented, "*It would be nice to have more skill building sessions like we did during the first week, throughout the term. Maybe biweekly or once a month. Gives a chance to interact with the broader group and learn more outside of the project work.*"

Recommendation

1. The Onboarding and Orientation program be rolled out over 8-10 work days (instead of 5) to facilitate greater absorption and integration of learning, and to provide a Host and project context in which to anchor the new learning.
2. 4 additional training experiences be provided throughout the Internship term to help advance learning and to encourage active peer-to-peer learning.

Insights and Recommendations

4. In-person versus Virtual Onboarding

We were able to swiftly adapt our orientation and onboarding program to a virtual and online format, in response to the COVID restrictions, which allowed us to launch on time and deliver on our training commitments to the Interns regardless of location and geography. And while all deliverables were achieved, the impact of virtual training was far less than could have been achieved in an in-person setting. Virtual platforms are good but imperfectly mimic the types of in-person interactions that help to build the essential team cohesion and familiarity that is needed to launch high performing teams.

Recommendation

Going forward, with the assumption that interns can safely gather in small teams, it is recommended that the original, in-person format be used for orientation, onboarding and for team PBL.

All participants adapted quickly and well to online, virtual platforms for learning and team collaboration.

5. Leadership Roles

As the multi-disciplinary teams identified roles and responsibilities, some students emerged into critical leadership roles. While the projects progressed in the relative social vacuum of the virtual platforms, these roles were rarely or never refreshed, meaning that on each team, one Intern cultivated their leadership skills, while the others missed out.

Recommendation

Teams be prompted to intentionally cycle through key roles (including Leadership, but also other key roles), so that each intern has an opportunity to develop essential competencies, rather than remain in their default roles.

6. Full team engagement with Mentors

On most of the teams, the groups chose to identify one member to interact with the Mentor. They may have been done, as part of their 'identifying roles and responsibilities' task, to streamline communications for the efficiency of the project, but the unintended negative effect was that the other individuals missed out on the benefits of mentorship. The objective of having dedicated senior Industry mentorship was to provide deep technical expertise, but also to provide general industry guidance and network access, and one-on-one counsel. It was felt that the Interns did not make full use of their Mentors as a resource, and some did not engage individually with their Mentors at all. This was exacerbated by the virtual platform that permitted individuals to 'participate' with their cameras off and their microphones muted, leaving the responsibility of the conversation to a single team member.

Recommendation

All team members be required to attend and participate in weekly Mentor meetings. All come prepared contributing questions, project summaries, and ideas to the discussion as this is an essential part of the peer-to-peer learning and individual development process. A team leader will be permitted to represent the team for scheduling interactions

7. Improved Support and Communication from COVE

The study highlighted a gap in the support network that failed to extend to the Mentors or that assumed greater independence than was wanted. Similarly, several of the Mentors reported being unsure about the scope and milestones for the projects they were advising on, and none of the Hosts felt the Mentor effectively liaised between the employer and the team. These findings highlight several gaps in communication about the expectations and role of the Mentors in this pilot. And ownership for this gap in communication falls squarely on the shoulders of COVE.

Recommendation

COVE provides an orientation session with the Hosts and Mentors to outline their respective roles, expectations, and how to best liaise to support and advance the Interns and the project.

COVE program manager proactively connect with the Mentor and the Host together on a weekly basis to solicit feedback on how the respective teams are working, on any challenges or issues that are arising, and to ensure that the teams are receiving all the support and resources needed to meet each milestone of the project.

Insights and Recommendations

8. Roles and Responsibilities Documentation

The task of defining the team roles and responsibilities was left to the respective project teams. However, it became evident that everyone would have benefited from greater clarity (and documentation) on the roles and responsibilities of all 3 stakeholder groups (plus COVE) at the outset of the program to set expectations and direction. Teams were expected to develop a written requirements document, however this was not readily accessible to everyone.

Recommendation

Document and review requirements documents during orientation (with all stakeholders), and store in an accessible file for ongoing review. Included in this would be a defined structure or protocol for interactions and communications between the three entities (plus COVE).

9. Industry Awareness and Networking

COVID imposed significant restrictions on networking during the Internship program. Efforts to virtualize networking did not obtain the same result as they relied on familiarity and some Industry knowledge to effectively emulate a real-life dynamic.

Network building is a key part of this program - and is a critical resource for young talent that is new to the industry.

Recommendations

1. Interns be scheduled to participate in some networking events as part of their program and part of their workday (i.e. monthly COVE Ocean Connectors).

2. The networking function be outlined in the Roles and Responsibilities documentation, and that key stakeholders (Hosts, Mentors and COVE) each take on the task of introducing Interns to at least one additional Industry member.

10. Project Duration

Feedback on the project duration was mixed, with half of the stakeholders appreciating the manageability and value of the sprint projects (7-8 weeks), and the other half expressing an interest in projects with longer duration (4-8 months).

One Intern commented, "I would have loved for the first placement to last for longer to be a more fruitful experience."

Recommendation

1. Offer flexibility in the duration of programs. This is already a low volume, high touch program, with several bespoke features, that could offer additional flexibility in team composition (of skills) and in project duration. Longer duration would permit Interns to engage in larger projects and would benefit deeper integration of learning between the classroom and the WIL site.

2. This type of program flexibility and customization would entail added administration, and reporting, as well as continuous intake and supervision which can add a resourcing challenge. This in turn would limit the scalability of the program (without adding additional resources), but could result in deeper student engagement and retention, and improved access to top talent, as well as greater value to Host companies.

Virtualization of the WIL Program

An unanticipated feature of this WIL pilot program, provoked by the global COVID-19 pandemic, became the virtualization of all activities and functions. In turn, an additional success metric was added that evaluated the extent to which a virtual collaboration and work experience could effectively mimic the intended in-person orientation and work-place-based WIL experience.

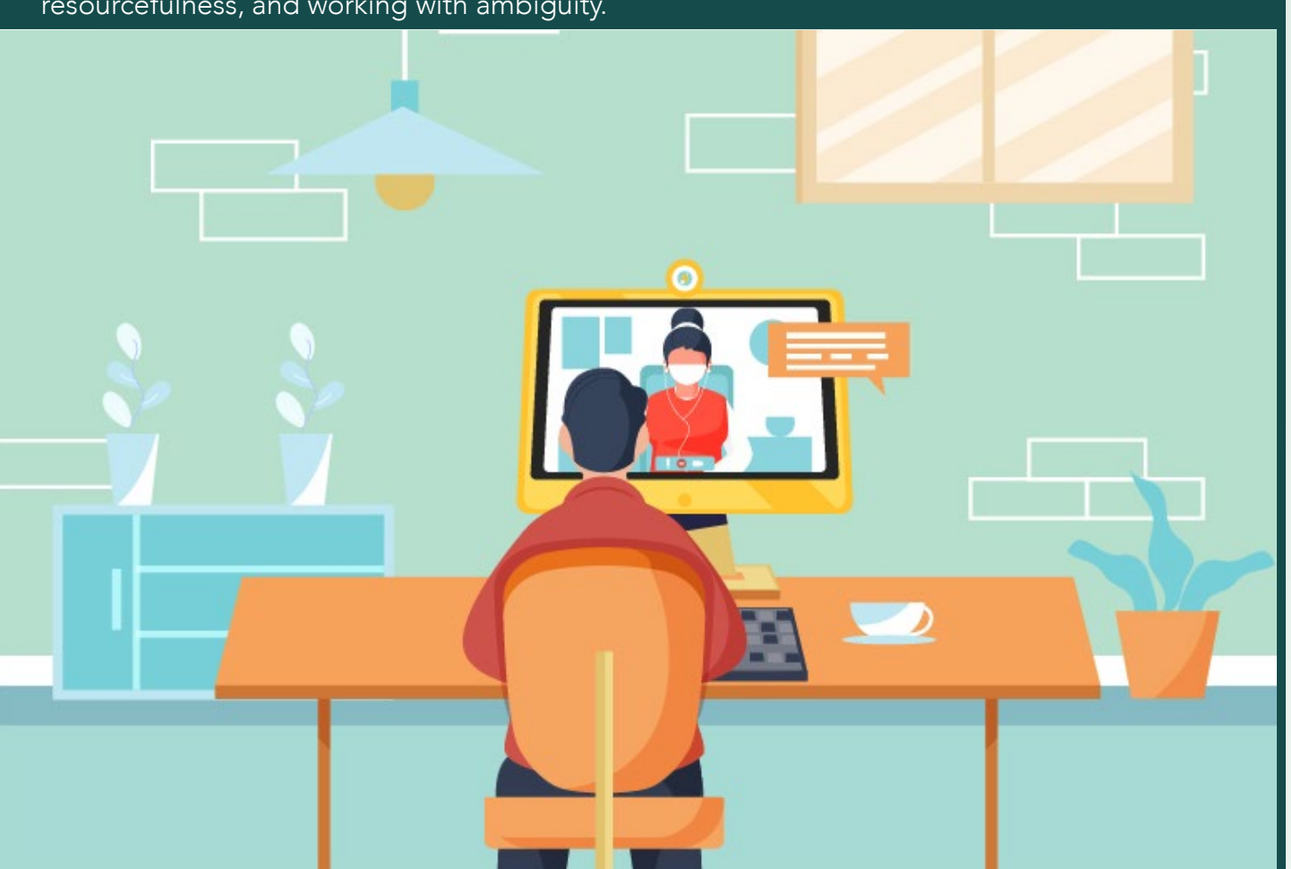
Based on feedback and observational data, it can be concluded that the virtual COVE Internship program was an effective but not ideal proxy for the in-person program.

All stakeholders felt that the experience was good, and that the project expectations were delivered upon.

However, the experience did not quite match the thrill of working collaboratively, in settings where innovation happens, with engaged industry leaders and peers, where ideas and learning can flourish.

Our interns witnessed and participated in industry responding in-real-time to an ever-evolving global challenge that changed the 'what' and 'how' of work. These may prove to be the greatest take-aways for this cohort.

Perhaps the greatest value that came from this experience, from a future skills perspective, was the cultivation of competencies relating to adaptability, resourcefulness, and working with ambiguity.



Conclusion

This internship pilot set out with several lofty objectives, most of which related to

1. Changing people's minds
2. Hiring diverse talent
3. Considering an industry that they'd not considered before
4. Working with peers with different backgrounds and capabilities;
5. Taking on the challenge of an ill-defined problem and working it through.

This program will potentially have tremendous impact on the industry insofar as it will help to attract top-talent that might never have considered ocean industries.

Perhaps not a traditional measure of ROI, it is possible to assess the return on investment for this program by considering the data we gathered and how it helped us answer key questions.

1. Are more young people engaged in the ocean industry? *Nine of the ten Interns said yes.*

2. Did many transition their Internship experience into employment? *Five out of ten did – and the others are returning students.*

3. Are the Host organizations more willing to participate in future WIL programs? *All Hosts said they would do so.*

4. Are more Industry members willing to hire young if they have a role, and willing to commit to their development on the job? *All Mentors and Hosts said yes.*

5. Are more Industry members willing to hire diverse students? *Of the five interns who were hired, four were from non-traditional programs, and 4 were from non-traditional groups in terms of gender, visible minority or immigrant/international student.*

When evaluating the success of this COVE Internship Pilot program against the metrics above, one can conclude that the program was highly successful.

It will also reinforce the importance of taking a multi-disciplinary approach to an industry that seems emphatically STEM-oriented. This program also reinforces the innovative nature of the industry overall and can itself serve to support as a re-branding effort for an industry in need of a new narrative.

This program has demonstrated that the east coast is on the vanguard of the Blue Economy and is a place where regional talent can stay, and where talent from-away can come to explore the Blue Economy.

For any follow-up questions or inquiries, please contact
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COVE WORKFORCE INITIATIVE
Executive Summary Report prepared by Dr. Sherry Scully
November 2020

Reference as: Scully, S. (2020). Program Effectiveness Report: Examining the efficacy of the COVE Ocean Internship Program in a virtual world.

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