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LEGACY

REAL PROJECTS. REAL LEARNING.

2021

SkillsBuild Innovation Camp*:

Learning Paradigm Innovation

SPEARHEADED BY

Asia Pacific College

Front End Web Development for Resilience

*IBM *SkillsBuild is an initiative to give every adult the opportunity to develop technology and professional skills regardless of their background, education, or life experiences.*

ABOUT

Guided by integrity, industry and innovation, Asia Pacific College (APC) believes in the power of progressive education. This is achieved when students acquire immersive experiences through industry-based projects.

***LEGACY** aims to promote APC's innovative projects undertaken with its industry partners. These projects aspire to deliver positive impacts to stakeholders.*

This is the first of the many issues to be released by APC to showcase its pioneering and innovative projects.

***Real Projects. Real Learning –** APC**'s Legacy**.*

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Abstract

Asia Pacific College continually expands its learning delivery techniques to be able to produce future-ready students that have the skillsets which match the growing needs of the industry. One such technique was applied in the SkillsBuild Innovation Camp: Front End Web Development for Resilience. The program was implemented in the school's web development classes where students learned the basics through the IBM SkillsBuild digital learning platform, and their skills further enhanced by APC professors and international mentors from CodeDoor. As a tangible measure of their learnings, students were tasked to create resiliency projects for Resilient.ph and DOST-STII through the ARISE Foundation. Selected projects were presented to stakeholders during the program's culminating event. To measure the quality of the delivery, content, and learning experience of the participants, results of the survey conducted on stakeholders are presented and analyzed.

Introduction

Asia Pacific College (APC) has persistently innovated to give the best learning opportunities to its students, even when face-to-face learning was hampered by the pandemic. In keeping with its thrust to deliver quality education through experiential learning and be adaptive to the continually evolving requirements of industry, APC piloted the SkillsBuild Innovation Camp for Front End Web Developers. This transformative approach to skilling combines self-directed online learning on front end web development and design thinking with mentor-assisted project-based learning and team collaboration to solve real-world problems. This was a global initiative in cooperation with IBM, CodeDoor (a SkillsBuild partner) and ARISE.

IBM SkillsBuild is an initiative to give every adult the opportunity to develop technology and professional skills regardless of their background, education, or life experiences. IBM offered SkillsBuild partnership to APC in 2019, giving its students and staff access to the following privileges:

- premium learning content on the SkillsBuild platform
- access to industry mentors
- access to project-based learning leading to in-demand jobs in technology
- career assessments
- access to employment
- onboarding support from an IBM Digital Success Manager

This has opened the opportunity for students to explore and learn new skills independently online and on demand.

In 2020, students' interest in web development led IBM and APC to explore the possibility of customizing the SkillsBuild Innovation Camp offering on IBM SkillsBuild to focus on front end web development training and project experience. Thus, the SkillsBuild Innovation Camp, which gives learners an immersive experience in solving client problems using technology, evolved into the SkillsBuild Innovation Camp for Front End Web Developers. In the SkillsBuild Innovation Camp, students worked in teams to use design thinking as a human-centered approach to problem solving. This involved:

- thoroughly understanding client needs
- defining the problem
- brainstorming a solution
- creating a prototype of the solution
- iteratively testing and refining the prototype.

In the program, students worked in teams, guided by mentors, and pitched their solutions (minimum viable product) to a panel of judges. The judges could be potential employers or industry experts who could provide constructive feedback and could challenge students further through their line of questioning. The design thinking experience prepares students to enter the workforce as problem solvers, first and foremost. With the added focus on web development training, students could acquire the technical and professional skills to become well-rounded front end web developers and progress to more advanced software development roles with continuous learning.

The SkillsBuild Innovation Camp for Front End Web Developers was integrated into APC's traditional web development classes, preserving the ongoing touch points with APC professors, but giving students the freedom to take charge of their own learning online and challenging them to go beyond the IBM SkillsBuild and CodeDoor platforms or to approach peers and mentors to gain new knowledge and skills. This practice provides students with the skills to become

continuous lifelong learners to sustain a rewarding career in technology.

The teamwork component is intended to develop much-needed professional skills for the workplace where much work is done in teams. Students gain experience in honing their collaboration, communication, critical thinking, creativity and presentation skills and the need for diversity and inclusion. This not only gives students an experience of how projects are run in professional settings, but also allows them to create tangible evidence of their skills to include in their portfolios which they can showcase to potential employers.

Connecting students to relevant and real issues that surround them can enrich the learning experience. The ARISE Foundation made this possible by bringing in stakeholders from Resilient.ph and DOST-STII to pose their disaster resiliency problems to student teams for their projects.

Description of the Innovation

FIGURE 1 illustrates the framework applied to this learning delivery technique.

Participants from APC to the Innovation Camp were provided with web development and design thinking content from CodeDoor, available through the IBM SkillsBuild platform. They were grouped into teams of about five people. The student teams were paired with CodeDoor mentors, and with Resilient.ph beneficiaries, through the Resilience Co-Creation Expo, to work on projects relating to disaster preparedness and resiliency. As students worked with beneficiaries to define their problems and come up with solutions, they were also learning the necessary skills to develop their web applications for their projects and gaining experience working with a diverse team with support from an industry mentor from another part of the world.

APC, in partnership with Resilient.ph, focused on the theme that will enable opportunities to develop technology solutions that matter most to humanity: disaster preparedness and resiliency. As students worked with beneficiaries to define their problems and come up with solutions, they did not only learn the necessary skills to develop the web applications for their projects, but they also gained experience working with a diverse team that included support from industry mentors in different parts of the world.

APC, in partnership with Resilient.ph, focused on the theme that enables opportunities to develop technology solutions that matter most to humanity: disaster preparedness and resiliency. Thus, aside from providing students with the technical knowledge to develop the solutions, these students were also equipped with the necessary knowledge about risk, recovery, preparedness, and resiliency. The main collaborators for disaster risk reduction and resiliency content were DOST-STII and ARISE. They provided opportunities to expose and influence students on the students' potential role in disaster preparedness and resilience

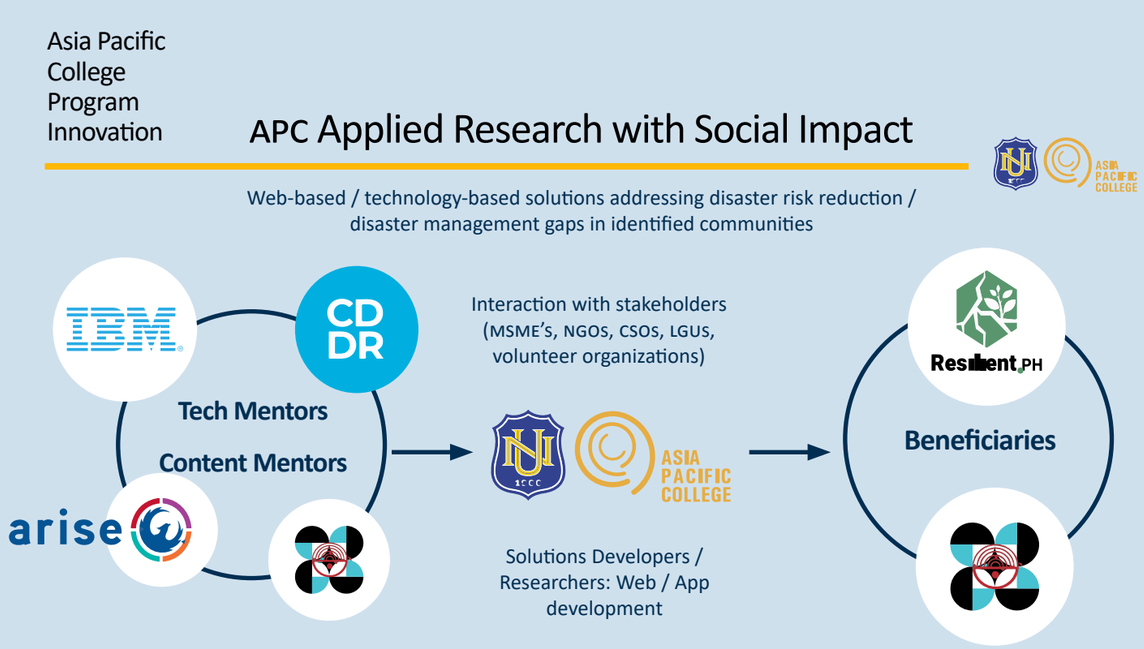

Figure 1 | APC Innovation for Resilience Framework

In this type of learning approach, students earn the following key benefits:

- Self-paced learning using IBM SkillsBuild with weekly checkpoints with assigned APC professors
- Technical and project support from global industry experts
- The opportunity to engage directly with government and stakeholders to solve the country's most pressing issues relating to natural disasters
- Experience working in a small project team with a diverse group of people
- Opportunity to pitch team solutions to stakeholders/beneficiaries and develop these further for implementation
- Globally recognized SkillsBuild badges
- Opportunity to grow one's professional network locally and globally
- Opportunity to create or build a portfolio that showcases skills in web development and project team experience on a real-world project

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Implementation

A TOTAL of 170 second year and third year APC students were chosen to participate in the 12- week innovation camp. IBM worked with APC to customize the SkillsBuild Innovation Camp program to fit within APC's existing college curriculum and meet the course guidelines and expected outcomes across two APC faculty members. IBM brought in execution partner CodeDoor to provide mentors for student teams who would bring in their expertise and industry knowledge to guide students with the projects as well as give career advice.

Figure 2 / Flow of Activities

Figure 2 shows the flow of activities that the students underwent to complete the requirements for web development classes. Following are the details:

1. **Selection of Participants**
   Second- and third-year students enrolled in ITELEC2, APPLDEV, and WEBPROG were selected to participate in the camp.

2. **Selection of Beneficiaries**
   Beneficiaries were chosen from Resilient. PH partners providing services for various resiliency programs for the country. These agencies with pressing challenges and gaps in terms of disaster risk reduction and disaster management were brought together with APC students and other stakeholders who may be able to address these gaps and challenges. Student participants' ideas were matched with the stakeholders' needs of a web-based/ technology-based solution to identified disaster management gaps from communities.

3. **Mentor Orientation**
   Mentors were introduced to each other and to project partners. They learned about the Philippines, the college, the target audience, expected outcomes, project brief, mentoring best practice, etc.

4. **Innovation Camp Orientation**
   Students attended the orientation sessions:
   - A session facilitated by APC mentors on the whole program.
   - A session facilitated by ARISE and DOST-STII on Disaster Risk, Preparedness and Resiliency 101

5. IBM **SkillsBuild Innovation Camp Kickoff**
   This is the event that officially launched and welcomed students to the SkillsBuild Innovation Camp. The students heard from speakers from APC, IBM, CodeDoor, DOST-STII, ARISE and some client beneficiaries.

6. **Program proper**
   - Students went through online courses by CodeDoor on coding, Css, HTML, GitHub, JavaScript, design thinking, innovation, and agile methodology.
   - Students formed teams, and teams were matched with mentors.
     - There were 27 teams in total.
     - They had weekly checkups with APC professors.
     - They had regular meetings with mentors and client beneficiaries/ stakeholders.

7. **Final output presentation to client beneficiaries**
   Students presented their final outputs to client beneficiaries.

8. **Innovation for Resilience Culminating Activity**
   This was an event attended by stakeholders from IBM, CodeDoor, APC, DOST-STII, ARISE, and Resilient.ph plus the representatives of the partner agencies and beneficiaries of the projects. The top 10 teams from an original set of 27 teams were selected to present their final pitches to a panel of judges during the event.

IMAGES: | Resilience Co-Creation Expo 2021

Assessment and Evaluation

Success Indicators and Survey Results

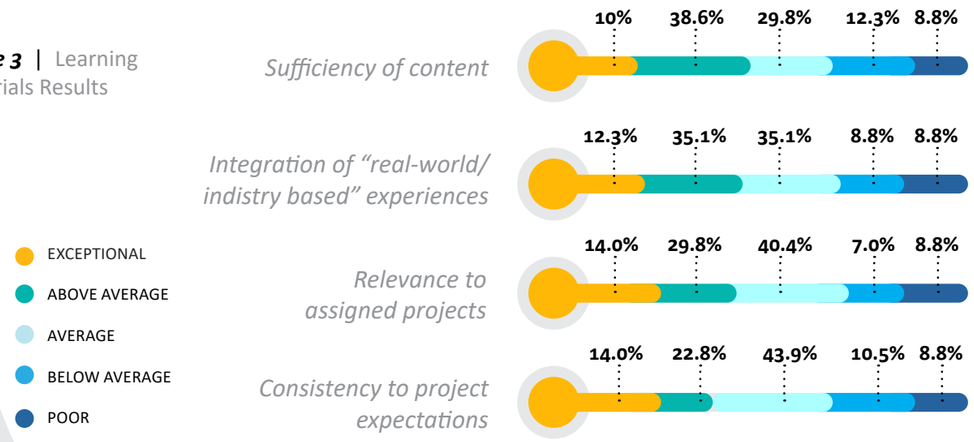
The SkillsBuild Innovation Camp was assessed and evaluated by conducting a survey among the projects' stakeholders classified into four groups: 1) students; 2) beneficiaries; 3) faculty facilitators and 4) APC administrators.

The following is the summary of the Innovation Camp's success indicators. A criterion is considered a success if it received an "Average" rating or higher from most respondents.

Stakeholder: Students

The survey for students included 7 items with sub-items covering major factors relevant to the project completion: (1) learning materials; (2) tools used; (3) effectiveness of the tools and platforms; (4) mentorship; (5) participation of beneficiaries; (6) teamwork; and (7) own team's presentation skills. Open-ended questions were also included in the survey to gather their insights on the following: (1) noteworthy features of the Innovation Camp; (2) features of the camp that need improvement; (3) usefulness of the project in developing social consciousness [disaster preparedness, risk reduction, and/or disaster recovery]; and (4) overall SkillsBuild Innovation Camp experience. The results are shown in Figures 3 to 11

Figure 3 | Learning Materials Results



Evaluation of Learning Materials

Figure 3 shows the result of evaluation from students in terms of learning materials used. Two of the given criteria were rated Above Average while the rest of the criteria were rated Average. This indicates that the learning materials have sufficient content with integration of real-world or industry-based experiences. Likewise, it was also noted that learning materials are relevant and consistent to project expectations.

Evaluation on Tools Used

Figure 4 | Tools Used Results

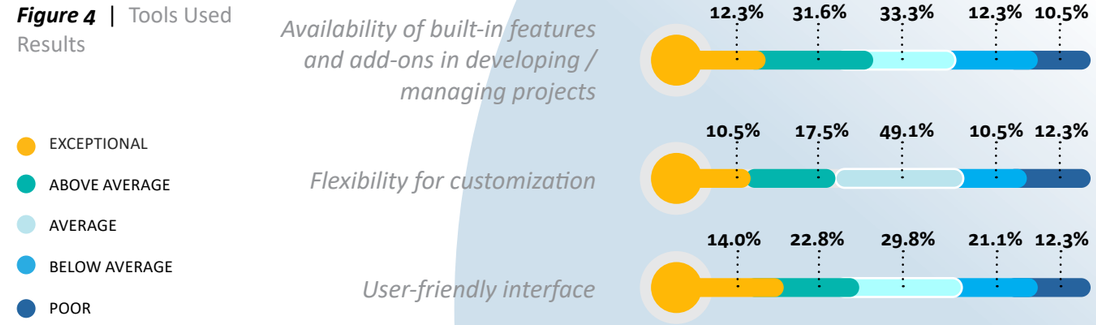


Figure 4 shows the result of evaluation from students in terms of tools used in the development of the project. **Availability of built-in features and add-ons in developing/ managing the project** was rated Above Average while the other two criteria – **tools flexibility of customization** and **user-friendly interface** were rated Average. In general, tools used in the project are useful in the development of the solution.

Evaluation on Extent of the Effectiveness of the Tools to Project Completions

Figure 5 | Effectiveness of Tools Results

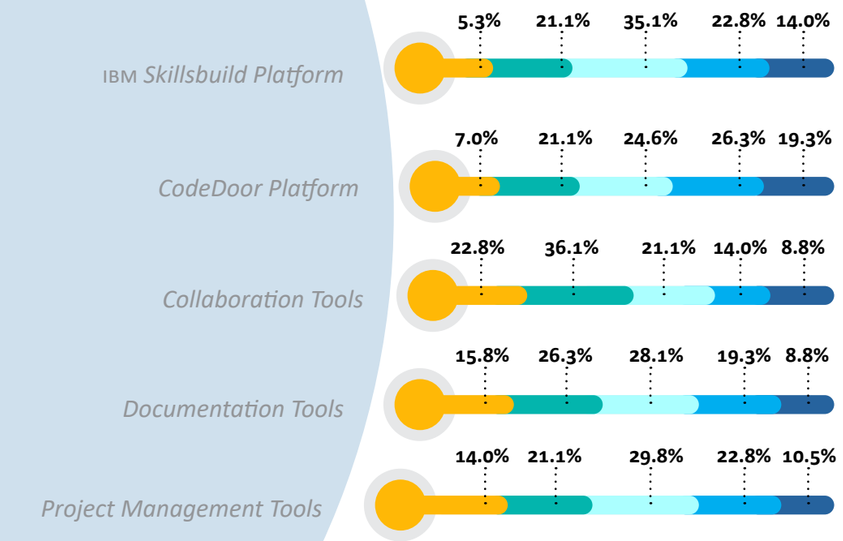
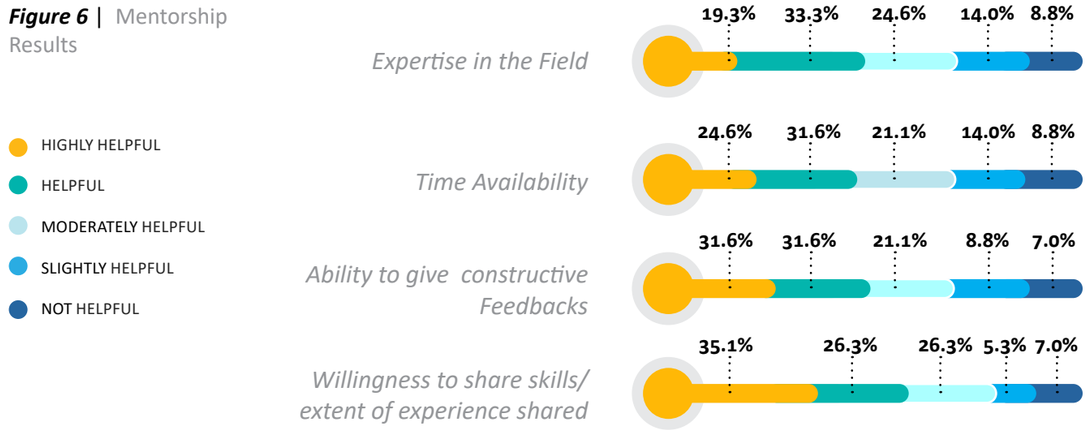


Figure 5 shows the result of evaluation from students in terms of the effectiveness of tools and platforms to project completion. Majority of the students rated **collaboration tools** as Effective in terms of project completion. Other tools and platforms like IBM **SkillsBuild and CodeDoor, documentation and project management tools** were Moderately Effective. In general, available platforms and tools are Moderately Effective in project completion

Evaluation on Mentorship

Figure 6 shows the result of evaluation from students in terms of helpfulness of mentorship in achieving project objectives or requirements. It was noted that willingness of the mentors to share their skills or expertise is Very Helpful in the project while the rest of the items were rated Helpful. This shows that mentors played a major role in achieving the objectives of the projects as identified by the clients.

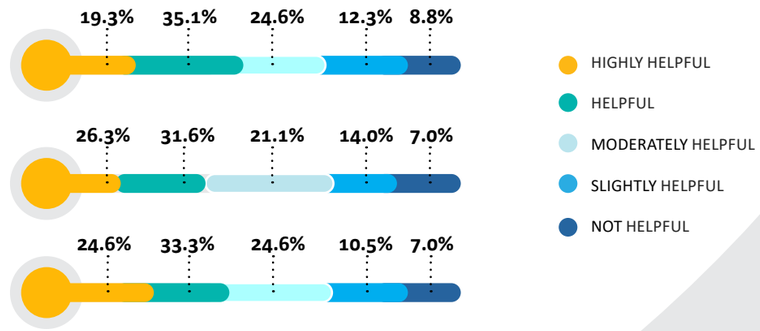
Figure 6 | Mentorship Results



Beneficiaries

Figure 7 shows the result of evaluation from students in terms of participation of beneficiaries towards the completion of the project. Majority of the student-respondents rated all the items Helpful. This clearly indicates that the beneficiary's participation in giving constructive feedback, along with their time and willingness to share the needed information, were helpful towards the completion of the project.

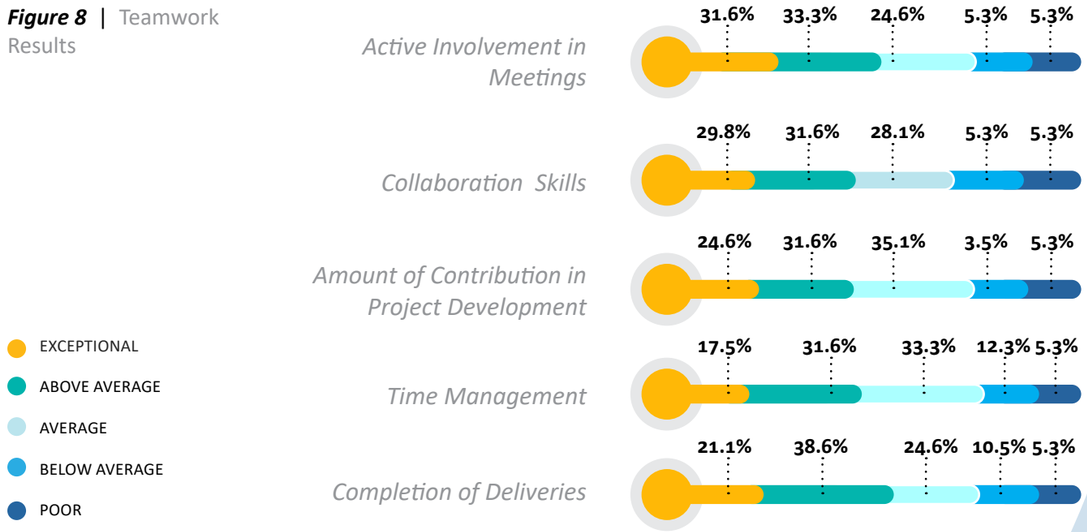
Figure 7 | Beneficiaries Results



Teamwork

Figure 8 shows the result of teamwork evaluation. Collaboration is evident as they have active involvement in meetings where majority of the students rated Exceptional. The rest of the items: collaboration skills, contribution in project development, time management, and completion of deliverables were rated Above Average.

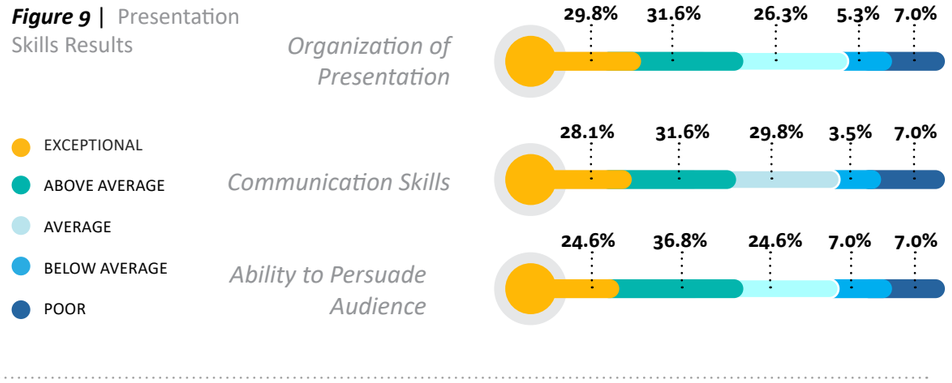
Figure 8 | Teamwork Results



Presentation Skills

Figure 9 shows the result of presentation skills evaluation. Majority of the students rated all the items: organization of presentation, communication skills, and ability to persuade audience Above Average. This is a clear indication that majority of the Innovation Camp participants have very good presentation skills.

Figure 9 | Presentation Skills Results



Usefulness of the Project in Developing Social Consciousness

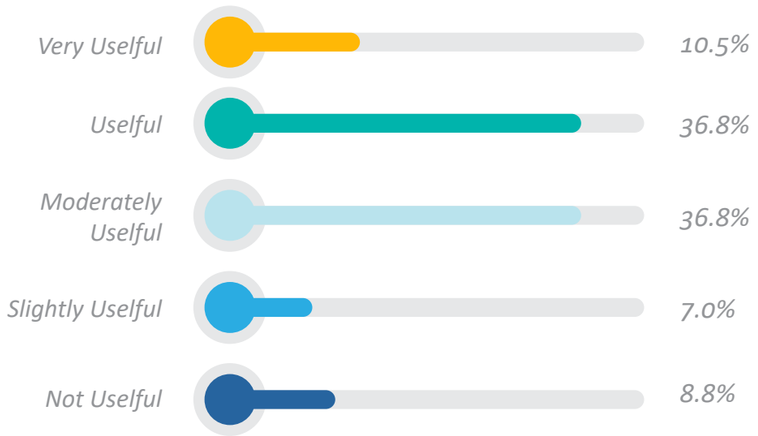


Figure 10 | Usefulness of the Project Results

Figure 10 shows that 84.1% of the students rated the usefulness of their project in developing their social consciousness as at least Moderately Useful. This shows that the joint collaboration with ARISE.PH and Resilient.PH played a major role in increasing the appreciation and understanding of the students in addressing the disaster management gaps of the students' clients that enabled them to provide effective solutions.

Overall Rating

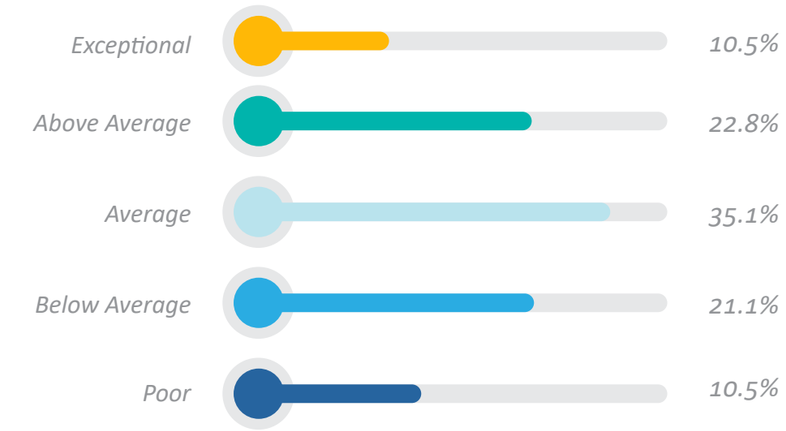


Figure 11 | Overall Rating

Figure 11 shows that the majority of the students (68.4%) have given the program a rating of at least an **Average**.

Stakeholder: Beneficiaries

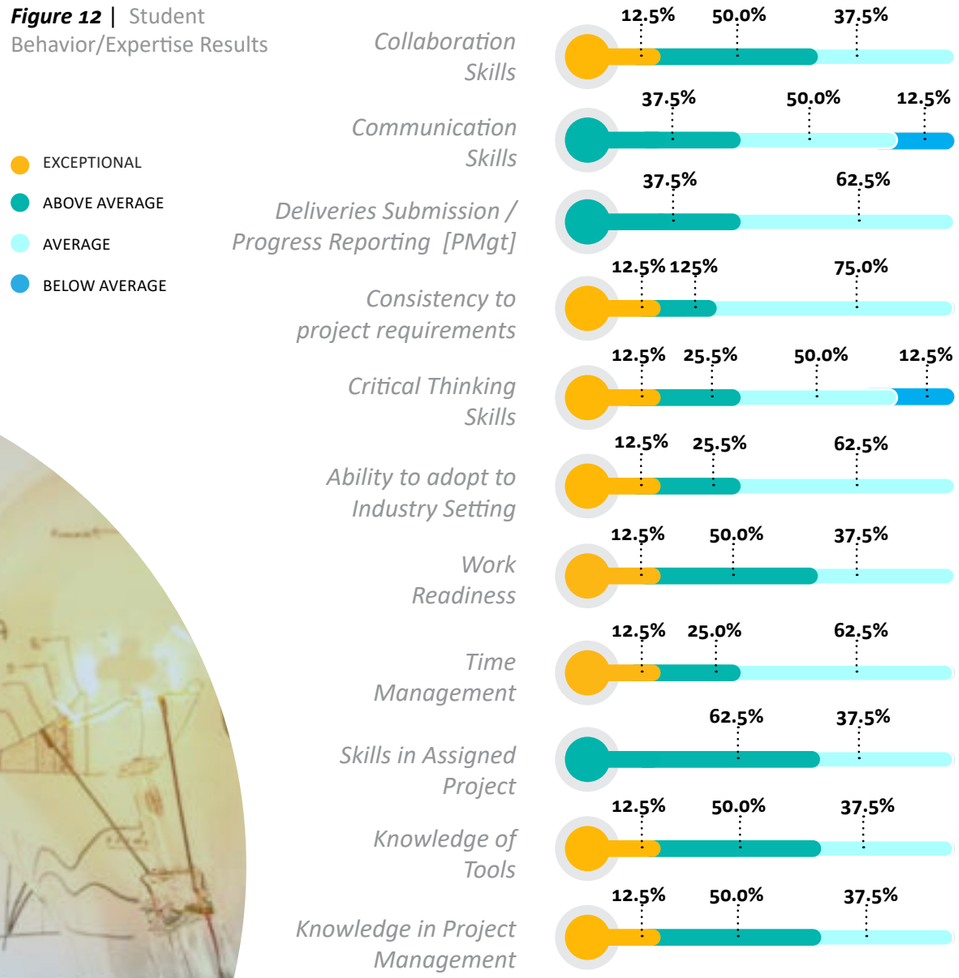
The survey for beneficiaries included 3 items with sub-items based on their work experience with APC students and mentors for the SkillsBuild Innovation Camp. The following were the items included in the survey: (1) student behavior/expertise; (2) solution provided to the agency; (3) social consciousness awareness. Open-ended questions were also included in the survey to gather their insights on the following: (1) solution provided by APC; and (2) overall comments on project highlights, social awareness of students, and areas for improvement. The results are shown in Figures 12 to 15.

IMAGES: | IBM SkillsBuild Innovation Camp MS Teams

Student Behavior/Expertise

Figure 12 shows the results on the beneficiaries perspective on the students' behavior/expertise. Most of the items were rated with at least an Average. A diverse team can yield good inputs to accomplish project outcomes, and that common program outcomes aligned with the institutional graduate attributes play a major role to make collaborative projects successful.

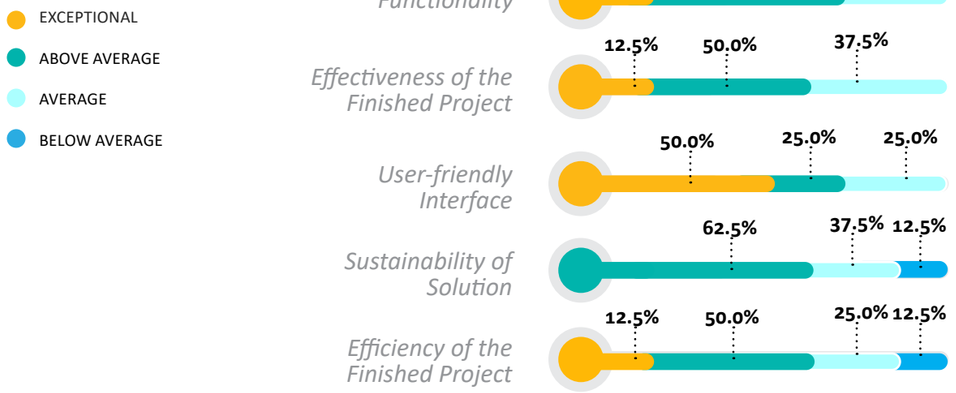
Figure 12 | Student Behavior/Expertise Results



Solution Provided to Agency

Figure 13 shows that all items listed were rated with at least an Average by most of the beneficiaries. This means that they were satisfied with the solution provided by the students in addressing their project requirements, along with the efficiency and effectiveness of the finished project.

Figure 13 | Solution Provided to Agency Results



Social Awareness on Disaster, Risk Reduction, Preparedness of APC Students

Figure 14 shows that all beneficiaries perceived the students to be aware in disaster risk reduction and preparedness issues. All respondents gave a rating of either an Average or Above Average (the choices for the rating were Exceptional, Above Average, Average, Below Average, and Poor). This means that the collaboration with ARISE Philippines paved the way for the students to be aware of disaster management and the importance of IT solutions to address disaster preparedness, risk reduction, and disaster recovery.

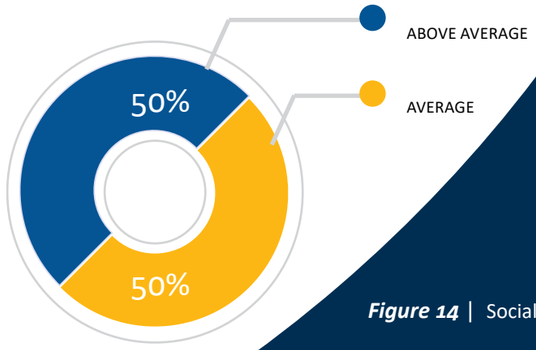


Figure 14 | Social Awareness Results

Overall Rating of the Solution Provided by APC to the Agency

Figure 15 shows that all beneficiaries gave the solutions provided to them by APC students with at least an Average rating (the choices for the rating were Exceptional, Above Average, Average, Below Average, and Poor). This implies that all project requirements were met and the needs that the beneficiaries specified to the students were addressed.

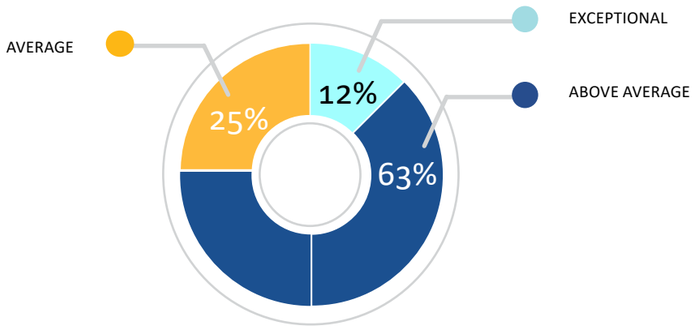


Figure 15 | Overall Rating of the Solution Results

Stakeholder: Faculty

The survey for faculty facilitators included important items with sub-items covering major factors necessary for the project completion: (1) usefulness of agile methodology; (2) effectiveness of platforms and tools used; (3) helpfulness of Innovation Camp in classroom management; (4) helpfulness of Innovation Camp in improving student's ability to learn; (5) mentorship; (6) participation of beneficiaries; (7) teamwork; and (8) team's presentation skills. Open-ended questions were also included in the survey to gather their insights on the following: (1) lessons learned with the new teaching strategy; (2) positive basic features of the method of SkillsBuild Innovation Camp; (3) features of SkillsBuild Innovation Camp that differ from previous practice; (4) new role of faculty as facilitator in the SkillsBuild Innovation Camp; and (5) overall comments on project highlights, social awareness of students, areas for improvement.

Tables 1 to 4 present the results of the survey.
For the items in Table 1, participants were asked to rate each as Very Useful, Useful, Moderately Useful, Somewhat Useful, or Not Useful.

Table 1 Results | Usefulness of Agile Methodology and Effectiveness of Tools Used

ITEM	VERY USEFUL	USEFUL	REMARKS
Extent that AGILE Methodology Enables Faculty to Guide Students Towards Completion of the Project	Requirements gathering		Results show that the use of agile methodology was generally Useful in completing the project assigned to different teams.
		Scrum process implementation	
		Sprint outputs	
		Scrum master progress monitoring	
Extent that Tools are Useful for the Completion/ Effectiveness of the Project	Collaboration tool		Results show that all tools used for project completion were Very Useful.
	Development tools		
	Project Management tool		
	Documentation tool		

For the items in Table 2, participants were asked to rate each as Very Effective, Effective, Moderately Effective, Slightly Effective, or Ineffective.

Table 2 | Results: Effectiveness of Platforms Used

ITEM	VERY EFFECTIVE	EFFECTIVE	REMARKS
Extent that Platforms Contributed to the Completion / Effectiveness of the Project	IBM SkillsBuild	CodeDoor	Results show that the both the Microsoft365 tools and IBM SkillsBuild platform were perceived as Very Effective, while the CodeDoor platform was Effective.
	Microsoft365		

For the items in Table 3, participants were asked to rate each as Very Helpful, Helpful, Moderately Helpful, Somewhat Helpful, or Not Helpful.

Table 3 | Results: Helpfulness of Various Factors towards Project Completion

ITEM	VERY HELPFUL	HELPFUL	MODERATELY HELPFUL	REMARKS
SkillsBuild Innovation Camp Approach in Facilitating Management of the Class	Performance assessment	Management of class size	Punctuality / Attendance Management	Results show that performance assessment and the mentoring and coaching sessions were Very Helpful in facilitating management of the class. However, management of class size and attendance were perceived as Helpful and Moderately Helpful, respectively.
	Mentoring and coaching sessions			

ITEM	VERY HELPFUL	HELPFUL	MODERATELY HELPFUL	REMARKS
SkillsBuild Innovation Camp Approach in Improving Students Ability to Adopt/Learn	Knowledge in business practice			Results show that all sub-items under this category are perceived to be Very Helpful.
	Professionalism			
	Deliverables management			
	New learning strategy			
How Mentorship from Industry Partners Helped the Students Achieve Project Objectives	Expertise in the field			Results show that mentorship from industry partners were perceived to be Very Helpful in achieving project objectives. It provided students the opportunity to communicate and interact with non-Filipino I.T. professionals which also allowed them to be exposed to the “real world” through the experience they had in interacting with their mentors
	Time availability			
	Ability to give constructive feedback			
	Willingness to share skills / extent of experience shared			
Participation of the Beneficiaries Contribute towards Achievement of the Project	Time availability			Results show that all sub-items in this category were Very Helpful towards the achievement of project outcomes. Setting a common time for consultation based on the availability of both parties should be given priority in the next run of the Innovation Camp or similar program.
	Ability to give constructive feedback			
	Willingness to share information / extent of information shared			

For the items in Table 4, participants were asked to rate each as Exceptional, Above Average, Average, Below Average, or Poor.

Table 4 | Results: Student Teamwork and Presentation Skills

ITEM	EXEPTIONAL	ABOVE AVERAGE	REMARKS
Teamwork	Amount of contribution in project development	Active involvement in meetings	Results show that teamwork for the six items is rated at least with an Above Average. This indicates that collaborative projects across different programs support the achievement of APC's graduate attribute on teamwork..
	Completion of deliverables	Collaboration skills	
	Attitude towards learning	Time management	
Presentation Skills	Communication skills	Organization of presentation	Results show that the presentation skills sub-items were rated at least an Above Average which indicates that APC students were trained to be good communicators as they were able to deliver an excellent pitch for their project.
		Ability to persuade audience	

Additional Observations from Faculty Facilitators

THE FOLLOWING are the actual observations of faculty facilitators on major factors relevant to the completion of the project.

Learning Materials

The CodeDoor format for assessing student completion of each unit is based on essay-type questions and answers that can be completed by including specific keywords that are shown when you click the hint button. This gives the student an opportunity to correctly answer the questions without studying the material.

Tools Used

GitHub was one of the collaboration tools covered by the CodeDoor course. Most of the other tools used by the students were suggested by the mentors, APC faculty facilitators, and the student groups. Because of this, there was little consistency across the sections regarding common tools to use.

Extent of the Effectiveness of the Tools for Project Completion

IBM SkillsBuild and CodeDoor platforms are not as engaging and interactive as other learning and collaboration websites. There are free and cloud-based collaboration, documentation, and project management tools which have better user interface and user experience than the IBM CodeDoor and SkillsBuild platforms.

Mentorship

Mentorship by the Australian and European IBM staff was the main highlight and benefit of the program for the APC students. It gave the students the opportunity to communicate and interact with non-Filipino I.T. professionals, which forced them to practice speaking only in English. This experience also allowed the students to be exposed to the "real world" through the experience they had in interacting with the coaches.

Beneficiaries

The experience and depth of knowledge in I.T. among the mentors was quite varied. Some mentors were more technical and showed the students updated topics in I.T., while other mentors taught the students the more basic and common I.T. topics. The mentors did not decide on a common set of tools and technologies to show to the students.

Teamwork

The decision for student groups to be mixed across course disciplines (Computing and Information Technologies students mixed with Multimedia Arts students) proved to be quite challenging for the students, but at the same time was beneficial to them. Challenging because each course discipline has its own requirements for the students. For example, the Multimedia Arts students were doing their term paper, and this took a major part of their time. Mixing the student groups across the course disciplines, on the other hand, allowed each group to have a healthy mix of talents that the project needs.

Presentation Skills

The key deliverable for the IBM SkillsBuild program was the pitch presentation, for which IBM had defined the pitch presentation criteria for evaluating the presentations. Because of this, the students focused on coming up with a good pitch, which was critiqued by their CodeDoor mentors.

The collaboration with Arise.ph and the requirement of the groups to work with real NGO clients increased the awareness and understanding of APC students on the Philippine situation through their work with their chosen NGO clients. This is mutually beneficial to APC students, who get to work on "real projects for real learning", and for the partner NGO groups, which are able to get "free" I.T. consultancy work through the deliverables of the student groups.

Overall Rating

The IBM SkillsBuild and CodeDoor websites could be more interesting, detailed, and objective in evaluating student performance. The students were pretty much left on their own to do "self-learning" which APC students, and Filipino students in general, are not used to doing. Filipino students tend to be more of the follower-type, rather than the independent learning-type of student. Of course, APC students must learn to adapt, and adjust, but this was rather abrupt for them.

Stakeholder: School Administrator

The survey for school administrators included important items with sub-items covering major factors essential to learning leading to the completion of the project. Open-ended questions were also included in the survey to gather their insights on the following: (1) advantages/disadvantages in terms of faculty loading management; (2) difficulties and recommendations for the implementation of SkillsBuild Innovation Camp; (3) subjects where new learning strategy of SkillsBuild Innovation Camp can be extended; (4) faculty members adoption in handling classes; (5) features of SkillsBuild Innovation Camp that differ from the previous practice; and (5) overall comments on project highlights, social awareness of students, areas for improvement. The results are in Table 5. For these items, participants were asked to rate each as Very Beneficial, Beneficial, Moderately Beneficial, Slightly Beneficial, or Not Beneficial.

Table 5 | Results: Most Beneficial to Project Completion

ITEM	VERY BENEFICIAL	BENEFICIAL	REMARKS
Most Beneficial/ Essential to Learning, Leading to the Completion of the Project		Orientation seminar	Results show all sub-items were given a rating of at least Beneficial and essential to the learning process leading to the completion of the project.
	Training		
	Mentorship		
	Immersion		
	Project Output		

IMAGES: | Resilience Co-Creation Expo 2021

Impact to Stakeholders

The Innovation Camp is a great program, and quite unique because it brings together IBM professionals, the clients for the projects, and the students, to work jointly to achieve a common goal."

Joegene Quesada

Mr. Joegene Quesada, faculty facilitator, also adds that having students mentored by IBM professionals gives a great boost to their confidence and allows them to practice communicating with non-Filipino I.T. professionals. It was also good to note that this model allows handling of cross-section groupings of 5 sections with the IBM SkillsBuild collaboration program.

Jogene Quesada

The collaboration between schools is paramount in this practice. It provided students the opportunity to approach projects in a more interdisciplinary way."

Robert Besana

says Mr. Robert Besana, School of Multimedia & Arts (SoMA) Executive Director.

Executive Director of the School of Computing and Information Technologies (SoCIT), Ms. Rhea-Luz Valbuena, also supports this sentiment.

Rhea-Luz Valbuena

Collaboration between international and local mentors makes handling class sizes easier. Student groupings are assigned to mentors while APC faculty facilitate the needs of both mentors and students, directed to the goals and outcomes of the courses. Collaboration between APC administrators with IBM and CodeDoor administrators to provide support to the students, mentors, and faculty; the collaboration between schools is paramount in this practice. It provided students the opportunity to approach projects in a more interdisciplinary way."

Rhea-Luz Valbuena

The SkillsBuild Innovation Camp eventually paved the way for students to collaborate with coaches from other countries and practice working and communicating with international developers/coders, as noted by Mr. Joegene Quesada.

Ms. Rhea-Luz Valbuena also noted that the Innovation Camp provides a better learning model. "While there were some areas for improvements, the model itself provided for students to learn in the "Now Normal" way. Students learn independently at first (which is an important personal skill in today's times), through the SkillsBuild and CodeDoor platforms. Independent learning is an important skill to acquire as future graduates. International mentors add into the knowledge by helping them apply the codes in their project in the industry-acceptable standards. The APC Faculty on the other hand, provides a checkpoint on student learnings and facilitates the various activities of the class in collaboration with the international mentors. The collaboration between the school's professors and the international mentors is great exposure and immersion for the faculty as well. The difference in culture and time zones, enabled the students to experience working with teams in the virtual global environment. "

Markus Tracker of CodeDoor expressed his gratitude on serving as a coach for IBM SkillsBuild.

We are happy to help, as we try to use our privilege to help others. The important fact here is you can ask for help. Don't fear about asking for help and finding allies within your team, your organization, and people you can trust."

Marcus Tucker

Marcus Tucker

IMAGES: | IBM SkillsBuild Innovation Camp Pitch Night 2021

Meanwhile, Richard Burgos of DOST-STII saw SkillsBuild as an opportunity despite issues brought by the COVID-19 pandemic.

For us, we are learning that to survive this pandemic and thrive, we needed three things: one is to pivot our ability to adjust – if you cannot deliver something one way, you have to deliver it another way; the other one is to perform – we still have to perform, as students need to produce their requirements for school; and lastly, is to excel despite all our limitations."

Together with the promise of these young people creating solutions for our day-to-day problems, we can come together as a global village. The world is here with us: we are one global village."

Richard Burgos

Richard Burgos

On the other hand, Jed Cruz of IBM PH is looking forward to working with new innovators.

We look to you who are our future in this innovation space and encourage you to develop them and continue the pace you are bringing in with these new ideas, as well as innovations to help uplift the country and every Filipino altogether."

Jed Cruz

Jed Cruz

Bettina Cutler of IBM also shared how IBM's values as a company were imparted during the camp.

Innovation will continue to bring about changes in technology over time. However, our mission has stayed constant – to use innovation and technology to make the world a better place. I hope that through the SkillsBuild Innovation Camp, you are more aware of what is going on in your communities and use technology and the skills you have learned to take on problems that matter and to build solutions that will make a difference to people's lives."

Bettina Cutler

Bettina Cutler

Alexander Pama, Board Member and Co-Chair, ARISE Philippines, emphasized that the SkillsBuild Innovation Camp is a great example of how we can build resilience by co-owning the problem and co-creating real solutions to address them if only to mitigate existing risks and preventing the creation or development of new risks as we continue our social and economic progress.

We at ARISE Philippines are very proud of our involvement in this undertaking if only to be part and be of assistance in your learning process. We appreciate this as a way of getting our students, our future leaders, involved in the co-creation of sustainable and real solutions which begins from co-owning the problem."

Alexander Pama

Alexander Pama

IMAGES: | IBM SkillsBuild Innovation Camp Pitch Night 2021

Ace Esmeralda, Resilient.ph Chief Resilience Officer, highlighted the impact of the SkillBuild Innovation Camp in supporting the attainment of sustainable and resilient society.

One of the so many impressive things that we have seen from this initiative of APC *is the coming together of different groups to contribute to the learning process of the students. This allowed the students to be grounded on the current reality and factor in the sensitivities and challenges on the ground into the solutions that they developed. If we are to become a sustainable, inclusive, and resilient society, we need our future leaders to be constantly mindful of everything that goes on around them, the joys and pains of every stakeholder, the gaps, and opportunities in the current processes. We feel that the initiative of* APC *is a very powerful step in the right direction."*

Ace Esmeralda

SkillsBuild Innovation Camp is the beginning of the true purpose of education for digital transformation dedicating one's profession for the good of humanity."

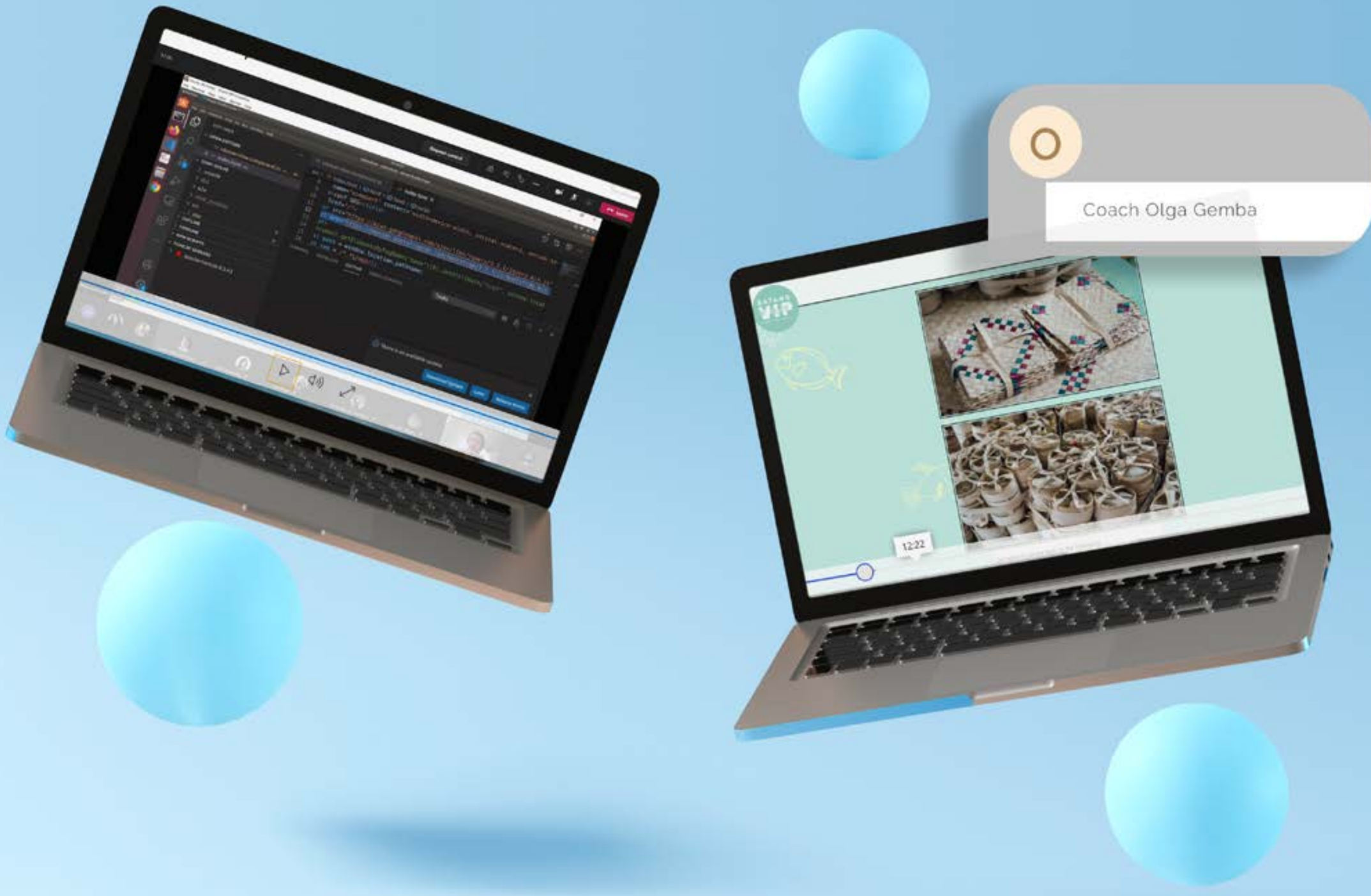
Dr. Tata Medado

Although Innovation Camp was somehow challenging, Regine Marie Sales (3rd year, BMMA) shares that working on the project brought out the best in themselves

Remember, pressure makes diamonds – now that we are in this event full of innovative students from APC*, I am proud to say that we are all diamonds, precious to our school, our country, and the future generations. Let us continue making them."*

Regine Marie Sales

IMAGES: | https://skillsbuild.org/ ; https://codedoor.com/



IMAGES: | IBM SkillsBuild Innovation Camp MS Teams

Culminating Activity: Pitch Night

The top 10 out of 27 teams were chosen to pitch their projects and compete against each other at the program's culminating activity. Turn to Appendix C for more details about the top 10 finalists.

Industry professionals were invited to evaluate and judge the best projects. They are: (1) Ernesto Boydon, Founder and CEO of Cyber Optimus Philippines Inc.; (2) Simonette Lat, Corporate Compliance Manager of SM Supermalls; (3) Jed Cruz, Technical Community Leader and Country Presales Leader at IBM; (4) Allan August Malig, Information Security and IT Governance Division Vice President of PJ Lhuillier Group of Companies; (5) Joey Flor, IT Head of RCBC Applications Development; and (6) Farid Bidardel, CEO of Tensor and CEO & Chairman of the Executive Board of CodeDoor.

The teams were judged based on the following criteria:

1. Well-defined problem
   The problem was well researched, well defined, significant to a particular community, has urgency and impacts several lives.
2. Problem addressed correctly by proposed solution
   The solution was shown to address the problem and improve the user experience. Future refinements to improve the solution were presented as well as ongoing maintenance requirements.
3. Correct identification of user needs
   The team was able to identify, through stakeholder engagement, the users' needs and their current experience relating to the issue.
4. Creativity
   The solution is original, creative, and feasible. Diversity, ethics, privacy, and security were considered in the design of the solution. User needs were factored in the design of the user interface and user experience.
5. Competence in their ability to present, deliver and deploy the solution to stakeholders
   The team inspired confidence in their ability to deliver and deploy the solution. They showed competence, good collaboration skills, a commitment to quality and passion. They understood risks and had a plan to manage risk.

The top three teams are listed in Table 6.

Rank	Team	Client Beneficiary	Problem	Solution	CodeDoor Coach
1st PLACE	CodeTzy	Alubijid Central School from DepEd Alubijid in Misamis Oriental	1. Difficulty of computation of grades, data collection, tallying of scores and consolidation of records of students due to the huge number of students in Alubijid Misamis Oriental Central school. The checkers are having some hard time scanning the works of their students. 2. Modules and Assessments are submitted late 3. Hard to manage due to loaded paperwork 4. tudents live in different places so the schools have no choice but to ship the modules to their students homes, giving the risk of passing the Covid-19 virus to modules whenever they are transferred from teachers to students and vice-versa	Mobile Checker App with features on: 1. More effective way of reviewing and checking DepEd modules using smart phones by using the smart phone's web cam. The app scans the DepEd modules to check if the students' answers are correct. It also produces reports on total scores of the students in the module/s. 2. Features include automatic results by scanning the answer sheets and uploading it on cloud. To organize and transfer the collected information quickly and easily, Cloud-Based checking feature is to be used. The app will require 5-megapixels and above and it will use the same mechanism of QR scanning to transfer the data from paper to captured images. 3. Safety and healthy practices such as distancing and contact tracing are implemented because of the use of the app.	MARIAN ADAMACHE
2nd PLACE	RD	JCI Cebu Sinulog	1. Unequal donation distribution where donors have limited information to donate and donors can overlook donating into areas that need more donations 2. Burden on NGOs in sourcing finances and volunteers	Centralized platform for Donors and Client that includes: 1. Informative website for promoting donation drives and disaster resiliency 2. Donations Portal 3. Improved online donation process 4. Confirmation page and records manager	KARAN DEHGHANI
3rd PLACE	CodeSeekers	ODMS Enterprise	1. Lack of communication among clients 2. Unstructured flow of communication 3. Lack of financial assistance during post-disaster rehabilitation and recovery 4. Lack of skills in damage assessment and post disaster needs 5. Lack of risk assessment, mitigation and preparedness	ODMS Enterprise website with the following features: 1. Ping Feature – integrates the lack of communication among clients and their unstructured flow of communication 2. Financial Assistance Feature – solves the shortage of financial assistance during post-disaster rehabilitation and recover 3. Analytics Feature – generates conclusions based on the data history of the service area for better planning and forecast prevention from damage assessment, post-disaster needs, and risk assessment.	TOBI LANG

What's Next

Table 7 contains projects that will be continuing onto their next phase in APC's School of Computing and Information Technologies (SoCIT) project-based learning (PBL) classes for Term 3 AY 2020-2021.

Table 7 | Continuing Projects' List

CLIENT	TEAM	PROJECT
ODMS	Delecoders III	WEBSITE 2.0
	Codeseekers	
DRRH	Tricky Tech	
TGTUP (Green Thumbs Up)	Grizzly	

There is a plan to implement the same model in APC's extension classes in NU Laguna and Fairview for their web programming courses.

Appendices

Appendix A: Articles about the Program

IBM empowers Filipino youth to create Web solutions for disaster resiliency | BusinessMirror

https://businessmirror.com.ph/2021/02/06/ibm-empowers-filipino-youth-to-create-web-solutions-for-disaster-resiliency/

IBM Empowers Youth to Build Web Solutions for Disaster Resiliency - SDN - Science & Digital News (scitechanddigital.news)

https://scitechanddigital.news/2020/12/22/ibm-empowers-youth-to-build-web-solutions-for-disaster-resiliency/

RCX 21 - Collaborations for Resilience - Resilient.PH

https://resilient.ph/2021/01/rcx-21-collaborations-for-resilience/

IBM SkillsBuild empowers youth to build web solutions for disaster resiliency - Android - Filipino apps and news - Pilipinas

http://philippines.appsandnews.com/News-Android-IBM-SkillsBuild-empowers-youth-to-build-web-solutions-for-disaster-resiliency.html

IBM opens innovation camp to address IT skills gap in PH – Back End News

https://backendnews.net/ibm-opens-innovation-camp-to-address-it-skills-gap-in-ph/

With IBM SkillsBuild, youngsters can create net options - Smart Home Tec

https://www.smarthometec.co.uk/2020/12/25/with-ibm-skillsbuild-youngsters-can-create-net-options/

Episode 3 - Collaborations for Resilience - ResilienTalk | Podcast on Spotify

https://open.spotify.com/episode/2qXDPL4SGYfPkK7coYJXEO?si=n1fCFhxyQXubp_VnE5fEEQ&nd=1

Asia Pacific College / Code Door / IBM SkillsBuild Bootcamp introduction - YouTube

https://www.youtube.com/watch?v=966DvX2EfN4

Appendix B: Survey Forms

Stakeholder: Students Survey

https://tinyurl.com/SBICStudents

Stakeholder: Beneficiaries Survey

https://tinyurl.com/SBICBeneficiaries

Stakeholder: Faculty Survey

https://tinyurl.com/SBICTeachers

Stakeholder: School Administrator

https://tinyurl.com/SBICSchoolAdministrator

Appendix C: List of Projects, Organizations, Groups

* - Top 10 Finalists

Autism Response PH- Non Profit- Emergency Response

***Team Name**: Crackatui!

Team Leader:
Obsenada, Joseph - BMMA 182

Team Members:
Cortero, John Louie – MI 191
Delos Reyes, Leandrix – MI 191
Calzo, John Lester – MI 191
Benitez, Carl Kenneth – BMMA 182
Obsenada, Joseph – BMMA 182

Team Name: High6

Team Leader:
Olores, Francis – SS191

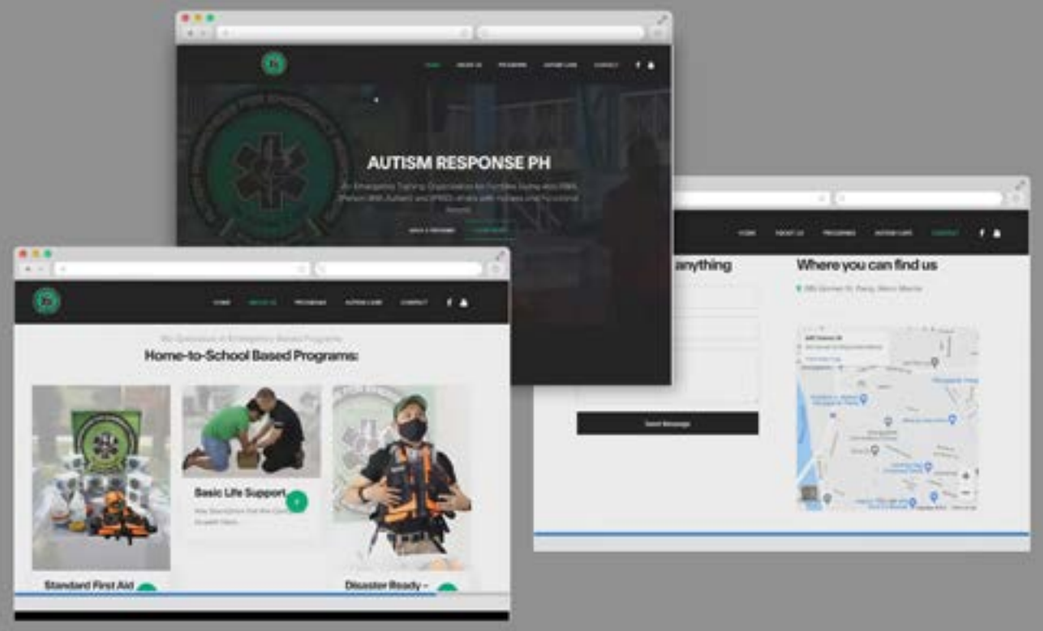
Team Members:
Austria, Clifford – SS191
Pagdagdagan, Aires – SS191
Ribo, Ian – SS191
Tinio, Jed Tristan – SS191
Ervite, Juan Enrico – EMC191

Team Name: The Next Level Play

Team Leader:
Elias Aneglo C. Viguilla - SF191

Team Members:
Ryan Miguel Manoguid - SF191
Meandrick Martin - SF191
Jan Lorenzo Valencia - SF191
James Edward Poco - SF191
Gualbert Sual - BMMA181

Autism Response PH



The Disaster Resilience Rating For Hotels- Industry Support Group- Hotels

Team Name: Tricky Tech

Team Leader:
Odango, Cheska Janine - MI192

Team Members:
Paronda, Louraine Marie – MI192
Chua, John Alexis – MI192
Viola, Carlitos Alfonso – MI192
Galicia, Karl John – BMMA181
San Pedro, Fredrick – BMMA181

Team Name: Electronic Youth

Team Leader:
Cabanas, Alexander - MI 191

Team Members:
Alvarez, Lowell - MI191
Hassan, Miguelangelo - MI191
Aquino, Danilo - MI191
Sy, Nicole - BMMA181
Marquez, Reimounde - BMMA181

Team Name: RAMsan Tech

Team Leader:
Topino, Klyde - EMC191

Team Members:
Garcia, Darniel Zidane - EMC191
Villalva, Gabriella – EMC191
Rodriguez, Duane – EMC191
Raneses, Rani Janelle – EMC191

IMAGES: | IBM SkillsBuild Innovation Camp Pitch Night 2021

The Green Thumbs Up Project- Non Profit- Youth Development and Environmental Stewardship

Team Name: Loud n Cloud

Team Leader:
Prats, Luis Tolentino – MI191

Team Members:
Cyril Joyce Ruaboro – MI191
Desiree T. Ugates -MI191
Emmanuel Pescasio – BSIT
Rachel Anne Quintos - BMMA182
Carl Eric Villanueva – BMMA182

Team Name: #TeamGrizzly

Team Leader:
Mercado, Nathaniel L. - MI192

Team Members:
Aquino, Kathrine P. - MI192
Barbon, Angela Nicole C. - MI192
Huet, Nicolas Eduardo V. - EMC191
Lumod, Isaiah M. - MI192
Tapia, David Louie S. - MI192

***Team Name**: RD

Team Leader:
Beltran, Maria Yuca - SS191

Team Members:
Caubang, Demeter Renee - SS191
Da-anton, Steven – SS191
Hermoza, Harold - EMC191
Rivera, Jose Gabrielle - SS191
Vergara, Aldwin – SS191

Team Name: Prototips

Team Leader:
Trisha Tolentino – SS191

Team Members:
Tobby Dampios – BMMA182
Shiaramae Faburada –SS191
Railey Flores – SF191
Janna Manrique – SS191
Erika Shiokawa – SS191

Alcofil- Social Enterprise- Alcohol Refilling

***Team Name**: Brewing Minds

Team Leader:
Michelle Manadero – MI192

Team Members:
Louise Gerard Binotapa – MI192
Richelle P. Cagoco – BSEMC 191
Franz Delos Reyes – BSEMC 191
Marc Kenneth Ricahuerta – MI192
Paul John Signo – MI192

Team Name: RamDoSan

Team Leader:
Rovic Castillo - BMMA182

Team Members:
Frances Abeñgana - BMMA182
Rose Gelline Cruz - BMMA182
Austion Lopez De Leon - MI191
Jomari Sabinay - MI192
Sherwin Ansay - SS 191

Team Name: Milk Tea(M)

Team Leader:
Nadine De luna- BMMA182

Team Members:
Angelo Navarro - MI 191
Jewell Castro - BMMA 182
Edaniel Gabe Go - EMC 191
Paula Tongol - BMMA 182
Bianca Villanueva - BMMA 182

***Team Name**: Parasol

Team Leader:
John Randell Cacacho

Team Members:
John Randell Cacacho - BMMA181
Marcus Lloyd Fabro - BMMA181
Ace Bryan Lino - BMMA181

ODMS- SME- Engineering Sales and Services

Team Name: Delecoders

Team Leader:
Yumul, Therese Nicole - MI192

Team Members:
Muñoz, Mikkaela Angela - MI192
Tomas, Charlie - MI192
Taladtad, Cymon - MI192
Talosig, Allen Paul - MI192
Placia, Keith – EMC191

***Team Name**: CodeSeekers

Team Leader:
Christian Paul Pili - MI192

Team Members:
Aian Mark O. Antonio - MI192
Gabrielle Rheana R. Valbuena - MI192
Jose Carlo Munar - MI192
Michael Justine Basco - MI192

Batang VIP- Non Profit- Community Development

***Team Name**: A Team

Team Leader:
Franz Bensal – MI 191

Team Members:
Ian Lawrence Jesalva – BMMA182
Marco Djolo Gutierrez – BMMA182
Timothy Velasco – MI 191
Topino Keith – MI 191

Team Name: KUDER JR

Team Leader:
Toribio, Domer Glysdi – MI191

Team Members:
Panga, Christine Joy – MI191
Robles, Kyle Roy – MI191
Palapal, Alyssa Joy – MI191
Ivanka Bren Melchor – BMMA
Chelsea Lou Inong – BMMA

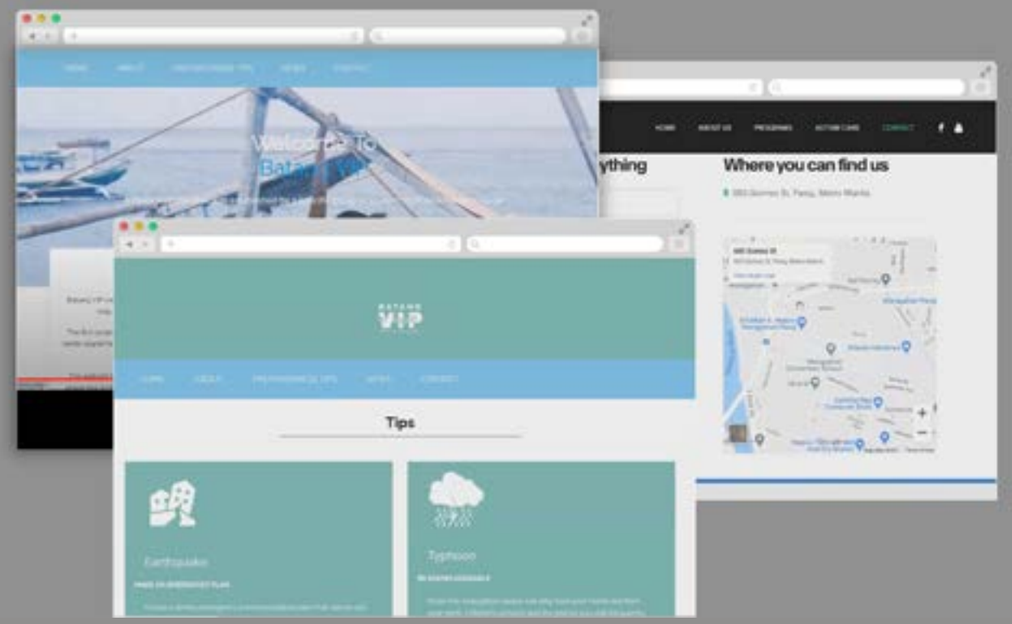
Team Name: I-Tech

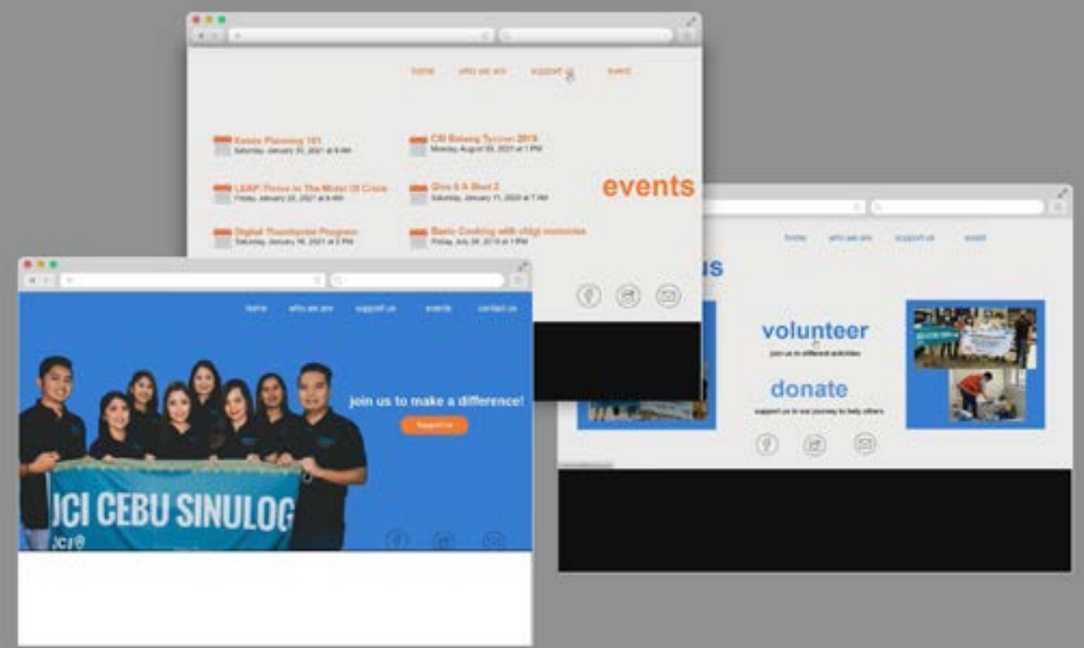
Team Leader:
Ken Angelo Carangan -MI 191

Team Members:
Joshua Ray Magno – MI 193
Russel Corachea – MI 193
Trishia Natividad - BMMA 182

ODMS Enterprise

Batang VIP





JCI Cebu Sinulog

JCI Cebu Sinulog- Non Profit- Civic Organization

***Team Name**: BWAH

Team Leader:
Durian, Mark Daniel– MI191

Team Members:
Ellema, Mary Jelean – MI191
Mallong, Maria Angela – MI191
Tindoy, Ehdgin Herson– MI191
Urquiza, Maria Theresa – MI191

***Team Name**: BZeta

Team Leader:
BZeta

Team Members:
Angel, Dave Vincent – EMC 191
Castaño Jet – BMMA 182
Evangelista, Abigail – BMMA 182
Gimena, Marianne – MI 192
Heramia, Amiel Ivan – EMC 191

***Team Name**: RAM

Team Leader:
Andrade, Bea – BMMA182

Team Members:
Daluz, Ivan Joshua – BMMA182
Sendiong, Bryan – BMMA 182
Duria, Christian Paul – CS-SS191
Esguerra, Jan Red – CS-SS191
Palacio, Sim Paul – CS-SS191

DOST-STII - Government

Team Name: The Innovators of Tomorrow

Team Leader:
Sales, Regine Marie - BMMA 182

Team Members:
Aspeli, Mabelle - MI 192
Reyno, Dwight Adrian - MI 192
Sales, Regine Marie - BMMA 182
Sicam, Justin Renz - BMMA 182
Gonzales, Jizhel Ann – BMMA 182

Philippine Press Institute - Industry Association- Media

Team Name: DevMedia

Team Leader:
Calura, Noel – BMMA182

Team Members:
Tan, Jeiel Aubrey – BMMA182
Manongdo, Reynald – BMMA182
Jao, William Richard – EMC191
Abad, Antonio Cesar – EMC191
Cervantes, Renato – SS191

Team Name: OCEANID

Team Leader: Dumbrique, Kyle - SF191

Team Members:
Baello, Josua Jefferson - SF191
Dela Cruz, Niel Angelo – EMC 191
Ejorango, Lionel Kerwin –SF191
Mirarza, Mariah Rocita – SF191
Ocampo, Jonathan Luke – SF191

IMAGES: | IBM SkillsBuild Innovation Camp Pitch Night 2021

Alubijid Central School, DepEd Alubijid, Misamis Oriental- Public School- Alubijid, Misamis Oriental

***Team Name**: CodeTzy

Team Leader:
Tacata, Shariff I. – BMMA182

Team Members:
Jethro, Rellones – BMMA 182
Leandicho, Jasper – BMMA 182
Lloyd Mendoza Carganilla – MI 191
Obela, Jefferson – BMMA 182
Raphael Angelo Mariñas - MI 191

Team Name: Hiraya

Team Leader:
Tomi Diano - BMMA 182

Team Members:
Miguel Calderon - BMMA 182
James Heramil – SF191
Camille Boto – MI 191
Marc Rowy - MI192
Roselle Policarpio - BMMA 182

Team Name: Techadan

Team Leader:
Lacdao, Patrick John

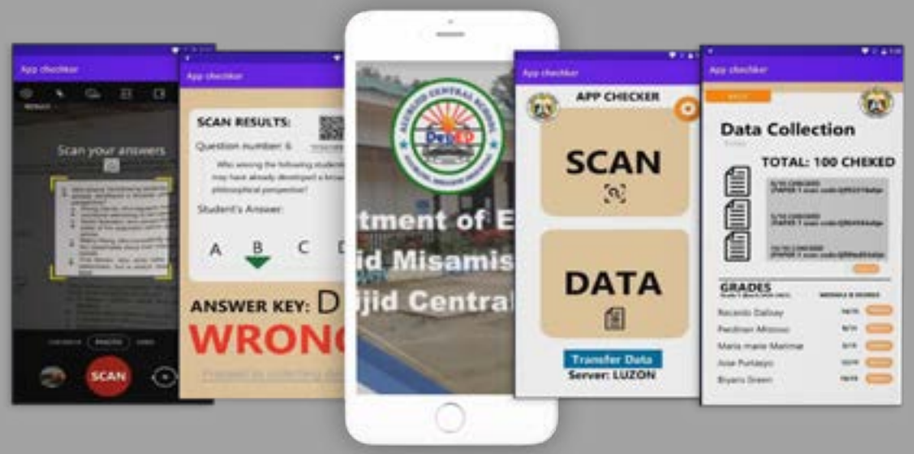
Team Members:
Agbulos, Heins Alexander
Lim, Cedric Justine

Team Name: Tsunami Technology

Team Leader:
Dumbrique, Kyle - SF191

Team Members:
Baello, Josua Jefferson - SF191
Dela Cruz, Niel Angelo – EMC 191
Ejorango, Lionel Kerwin –SF191
Mirarza, Mariah Rocita – SF191
Ocampo, Jonathan Luke – SF191

Alubijid Central School



Appendix D: Testimonials

Niel Angelo DelaCruz (2nd year, BSEMC-GD)

"Unless you try to do something beyond what you have already mastered, you will never grow" SkillsBuild had topics that I personally knew already but I really do not see myself as a maestro in Web Development, I cannot deny that I learned new things and practices when creating my own web page and all the tricks, tips, and recent tools that I may utilize in the future. Frustration when learning something new is already expected, but if new information is to be attained then it is worthwhile."

Fredrick San Pedro (2nd year, BMMA)

"The SkillsBuild is quite overwhelming for me, as a multimedia arts student who is still exploring the world of Web Development. However, the SkillsBuild taught me time management, which I lack, admittedly. It also improved my coding skills in HTML, Css, JavaScript, and among others."

Demeter Renee P. Caubang (2nd year, BSCS-SS)

"SkillsBuild provided a very interactive platform that makes learning code motivating for people of any programming expertise! Through the progress bar and organized flow of topics, learners can manage their studies flexibly and in--depth as CodeDoor encourages taking the initiative to research."

Maria Yuca T. Beltran (2nd year, BSCS-SS)

"CodeDoor has a very organized sequence of lessons. That is why it's not hard to grasp the concept of a difficult lesson because they tackled the pre-requisite before it."

Aldwin D. Vergara (2nd year, BSCS-SS)

"The SkillsBuild platform enabled us to tap our potential in programming and research through the skills and knowledge we acquired from CodeDoor. The organized flow of topics and evaluation helped us fully understand the fundamentals of programming, front-end web, and design thinking process in a challenging level projecting us closer to our future IT professional selves."

Jasffer T. Padigdig (2nd year, BSCS-SS)

"CodeDoor was a very new and exciting experience for me, as someone with experience in programming it helped me improve and expand my knowledge not only in programming but on how to become a programmer itself. Every chapter was always a different topic and it guided me on what i should be learning step by step, to someone new or would like to learn programming, CodeDoor is definitely one of the places that you could start."

Lionel Kerwin E. Ejorango (2nd year, BSCS-SF)

"I am still learning. In general, learning goes with everything, and one cannot just simply hinder. With the platform, which provides numerous projects and courses one can acquire, it allows users to further explore and learn behind each of it and grasp its intention it tells."

Gabrielle Valbuena (2nd year, BSIT-MI)

"IBM SkillsBuild Innovation Camp taught me the value of independent-learning, quality work and confidence to talk to our mentors and clients."

Darniel Zidane Garcia (2nd year, BSEMC-GD)

```
while(!succeed){
      tryAgain();
      learn();
}
```

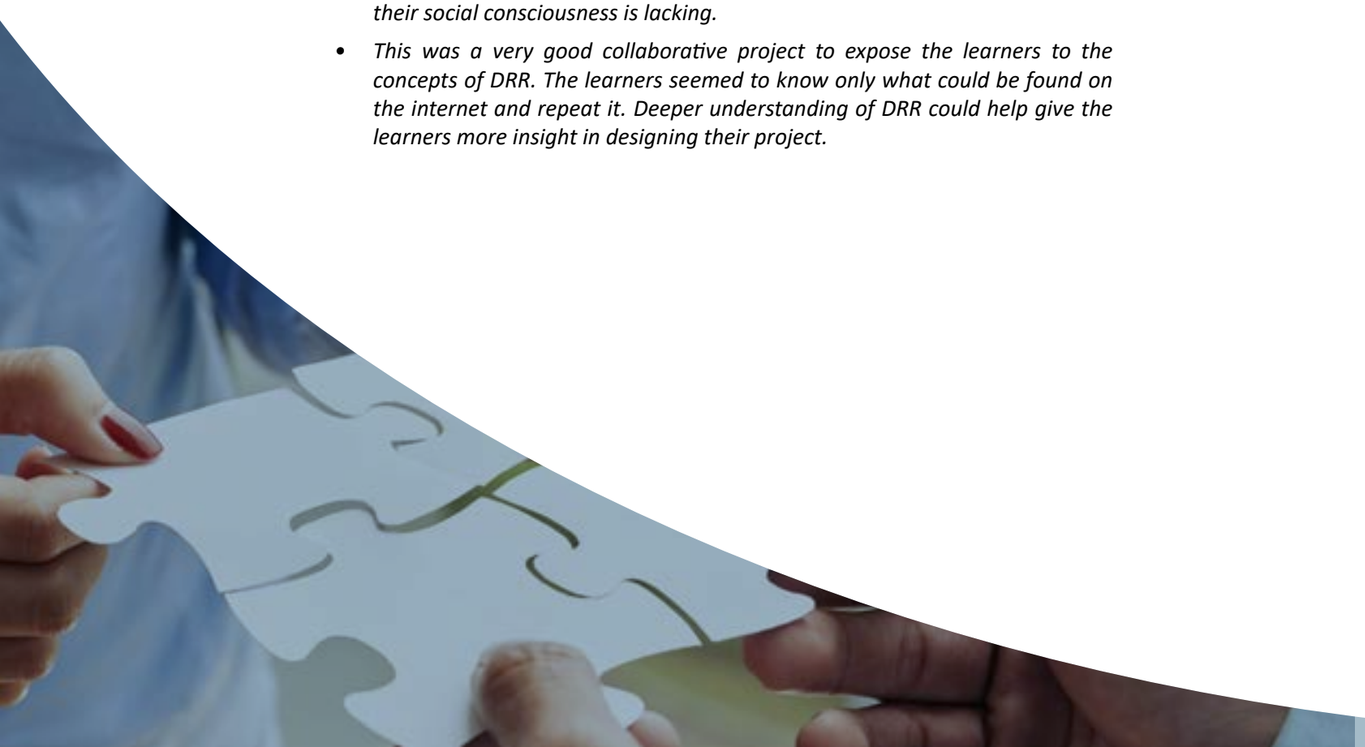
"SkillsBuild helped me widen my knowledge in various topics especially in the things that are needed in the industry. The platform taught me not to give up when the waves are getting high, instead, learn how to surf and enjoy the waves; keep trying until you succeed."

Appendix E: Comments from the Stakeholders

Beneficiaries

Comments on the social consciousness awareness of APC students in terms of disaster preparedness, risk reduction, and disaster recovery:

- *For me, the social consciousness is still low. Also, the students seem to move because of a "requirement". In my opinion, the enthusiasm and seeing the relevance of their work to the real world is not yet there. We need to further educate them and equip them with the proper mindset of the real world.*
- *Great. Willing to learn.*
- *They are well-aware of the factors that were needed solutions.*
- *They were able to adopt in their prototype the need for pre- and post-disaster management measures that would be vital in our company's operation.*
- *Excellent*
- *socially aware especially on floods, projects implementation in a locality*
- *Honestly speaking, the team who collaborated with us is focused on the deliverable and passing the subject. Their motivation is not in DRR; therefore, their social consciousness is lacking.*
- *This was a very good collaborative project to expose the learners to the concepts of DRR. The learners seemed to know only what could be found on the internet and repeat it. Deeper understanding of DRR could help give the learners more insight in designing their project.*



Comments and suggestions on project highlights, social awareness, extent to which the project could be improved, etc:

- *Drill down to the students that it is the learning process that is important not the graded outcome. If not, this activity is just another means to an end.*
- *I would suggest being more innovative in certain areas.*
- *Keep up the good work!*
- *We cannot wait to take hold of the project outcome!*
- *More time for students to create solutions.*
- *For me, to improve on this, students need to have a deeper understanding of what DRR is and how it is affecting our country and our planet. The students need to appreciate it more.*
- *"Please note that we worked with three different groups. Of the three, one group provided excellent input, good work attitudes and skills. They listened to the needs we gave as input, and they were able to deliver well. One group was the opposite. All three groups needed to have skills on design thinking, making elevator pitches and overall client relationship management. It would help the client collaborators to get a briefer on what can be expected of the learners, what the collaborative project is about and what outputs can be realistically asked from them. Since DRR is the focus of this activity, it would also help if the learners AND the teachers or judges get a background on DRR. In the judging during pitch night, it would help if the clients also were given the opportunity to watch. :) "*

School Administrators

The following 2 tables contain the responses of the administrators and faculty-mentors to open-ended questions from the survey.

ADMINISTRATOR 1	
Question	Response
Any suggestions on subjects where new learning strategy of SkillsBuild Innovation Camp can be extended?	Web design, Applied project 2
How well are the faculty members assigned in the SkillsBuild Innovation Camp adapting in terms of handling class size? Please share best practices if any.	I think they easily got used to it, and it was more dynamic in terms of discussions since the students have several mentors they collaborate with.
Describe the basic features of the SkillsBuild Innovation Camp that differ from the previous practice? Please provide recommendations for future use.	Multiple mentorships are the main innovation here and we can look for more opportunities in other subjects.
Comments/ Suggestions	The collaboration between schools is paramount in this practice. It provided students opportunity to approach projects in a more interdisciplinary way

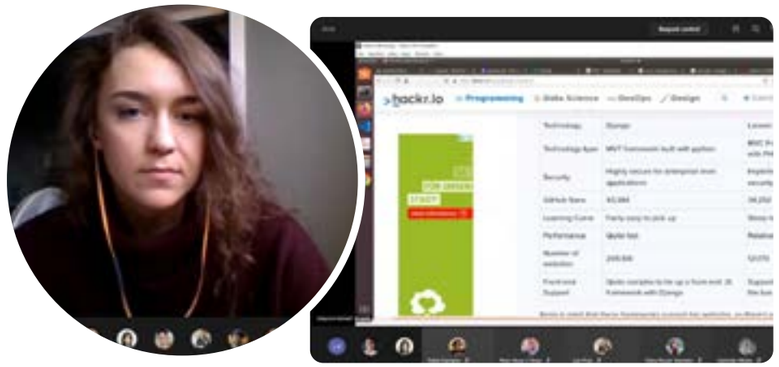
ADMINISTRATOR 2	
Question	Response
Any suggestions on subjects where new learning strategy of SkillsBuild Innovation Camp can be extended?	Capstone courses
How well are the faculty members assigned in the SkillsBuild Innovation Camp adapting in terms of handling class size? Please share best practices if any.	Collaboration between international and local mentors that makes handling class sizes easier. Division of tasks. Student groupings are assigned to mentors while APC faculty facilitate needs of both mentors and students, directing to the goals and outcomes of the courses.
Describe the basic features of the SkillsBuild Innovation Camp that differ from the previous practice? Please provide recommendations for future use.	Collaboration between APC faculty and international mentors. Interdisciplinary groups (members composed of students from different programs thereby applying their sets of “expertise” Collaboration between APC admins with IBM and CodeDoor administrators to provide support to the students, mentors, and faculty. Use of industry level materials, tool, and technologies. Collaboration by suppliers of platform, mentors with the actual client-partners of students in the project.
Comments/ Suggestions	Learn from this experience and apply to future endeavors.

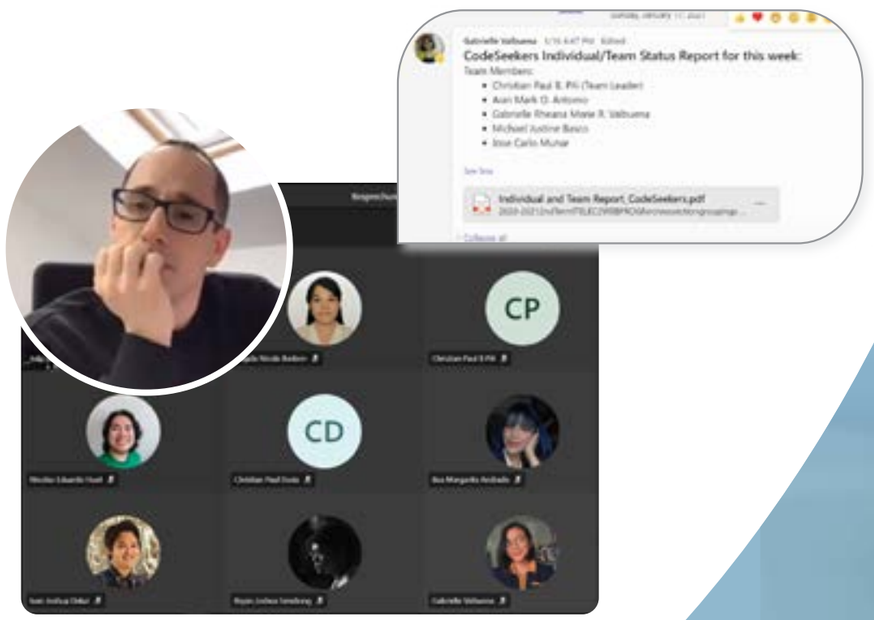
Faculty Mentors/Facilitators

FACULTY MENTOR 1	
Question	Response
Lessons learned with the new teaching strategy as faculty.	It is possible to handle cross section groupings of 5 sections with the IBM SkillsBuild collaboration program.
What is/are positive basic feature/s of the method of the SkillsBuild Innovation Camp?	Having students mentored by IBM Professionals gives a great boost to their confidence and allows them to practice communicating with non-Filipino I.T. professionals
Describe the basic features of the SkillsBuild Innovation Camp that differ from the previous practice.	The use of the IBM SkillsBuild and Code Door websites for self-study learning, the inclusion of mentors that meet with 3 to 4 groups of students
Describe new role/s of faculty as facilitator to the SkillsBuild Innovation Camp.	Moderator, organizer, guide, fill in the gaps, facilitator
Comments/ Suggestions	It is a great program, and quite unique because it brings together IBM professionals, the clients for the projects, and the students, to work jointly.

FACULTY MENTOR 2	
Question	Response
Lessons learned with the new teaching strategy as faculty.	Have no fear of learning new teaching strategies or incorporating new tech/ innovations into lessons.
What is/are positive basic feature/s of the method of the SkillsBuild Innovation Camp?	To provide the tools to the students and train them to become front end web developers.
Describe the basic features of the SkillsBuild Innovation Camp that differ from the previous practice.	N/A
Describe new role/s of faculty as facilitator to the SkillsBuild Innovation Camp.	To offer support and advice when needed.
Comments/ Suggestions	Requires full-time teachers

Appendix F: Snippets of the Mentoring Session





Appendix G: Acknowledgement

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