Promoting Critical Thinking through the Picha Project - Students' Experiences

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Abstract

As stated in the Malaysian Education Blueprint, one of the six primary attributes of student aspirations is promoting students' critical thinking skills. This attribute appreciates students who have diverse views, are able to think critically and innovatively, have problem solving initiative and an entrepreneurial mindset (Ministry of Education Malaysia, 2015). To meet these goals, an employer-relations project was designed for critical analysis students (CRI2101) with The Picha Project team, a social enterprise, to allow students to get hands-on experience on real-world entrepreneurial struggles. Hence, this research focuses on the impact of employer-relations project in social entrepreneurship on students' learning. Students' experience and application of problem solving skills are also observed and measured. A mixed method evidence of students' experiences was collected from questionnaire, focus group and journal entries, in which the results suggest that The Picha Project gives positive impact to students' learning. Thus, this paper will provide valuable information for instructors to implement social entrepreneurship projects in classrooms in order to develop critical, innovative and socially responsible students.

Keywords

Critical thinking skills, employer-relations project, entrepreneurship, students' experiences, learning

Introduction

"The function of education is to teach one to think intensively and to think critically" - Martin Luther King Jr.

Wagner (1997) believes that it is quite impossible for someone to become an expert in any field "without actively partaking in the processes of effortful and purposeful critical thinking" (cited from McDonalds, 2017, p.81). According to Bassham *et al.* (2013), critical thinking skills allow personal empowerment and enrichment to individuals, as a result of learning to use mind to its maximum potential. This involves "skilled judgment or observation" (Bassham et al., 2013, p.1) in analyzing and evaluating information, devising problems, using abstract ideas to interpret

information and communicating with other people effectively (Duron et al., 2016). These skills are illustrated in the upper level of Bloom's taxonomy: the Analysis, Synthesis and Evaluation levels, in which by performing these levels may lead to the enhancement of critical thinking (Bloom, 1956, cited from Duron, Limbach & Waugh, 2006). It is worth noting, these cognitive and socioemotional skills are significant in achieving the 21st century competencies – needed for success in future careers (Quint & Condliffe, 2018).

Besides, Brazeau (2013) claims that critical thinking skills are imperative to the successful decision-making process, not only for everyday survival, but also in an entrepreneurial business venture. Entrepreneurship has been critical to the economic growth of a country. Over the last few decades, the research of entrepreneurship as a discipline has held its own ground in academia due to the steady growth of interest in this field (Faggian, Partridge & Malecki, 2016). Hence, the need for a practical and applicable model for entrepreneurial education has turned out to be the central focus of the Education Ministry in order to produce holistic, entrepreneurial and balanced graduates (MOE,2017).

Therefore, any business program should seek ways to enhance students' critical thinking through deliberate practice, such as problem-solving based exercises (Al-Atabi & DeBoer, 2014; Mitchell, 2005). This can be done by exposing them to real-world problems which are commonly faced by entrepreneurs. The cognition of "me" into the problem itself amidst a combination of time pressure and a sense of uncertainty will affect the decision-making process that relies heavily on individual's critical thinking skills (Soutaris, 2005). This entrepreneurial learning will provide a good impact and an enriched learning experience, as students are exposed to the combination of self-directed learning and problem-based learning, which is proven to provide a significant impact on students' entrepreneurial intentions (McDonald, 2017). This is supported by the Ministry of Education Malaysia (MoE, 2017), as they believe that student entrepreneurial learning experience should be personalized by exposing them to the industrial context, increasing the use of experiential and service learning and leveraging technology-enabled models, to enhance 21st century skills.

Critical Thinking Framework
To prepare students for the 21st century skills, it is fundamental to encourage critical thinking skills through effective learning strategies. The outdated chalk and talk models in teaching critical thinking should be shifted to the contemporary pedagogical paradigms that involve student-centered activities for meaningful learning (Howard, Tang, Austin, 2015). The following model is a 5-step framework that can be utilized in a critical thinking classroom (refer Figure 1) as suggested by Duran, Limbach and Waugh (2006, p.161).
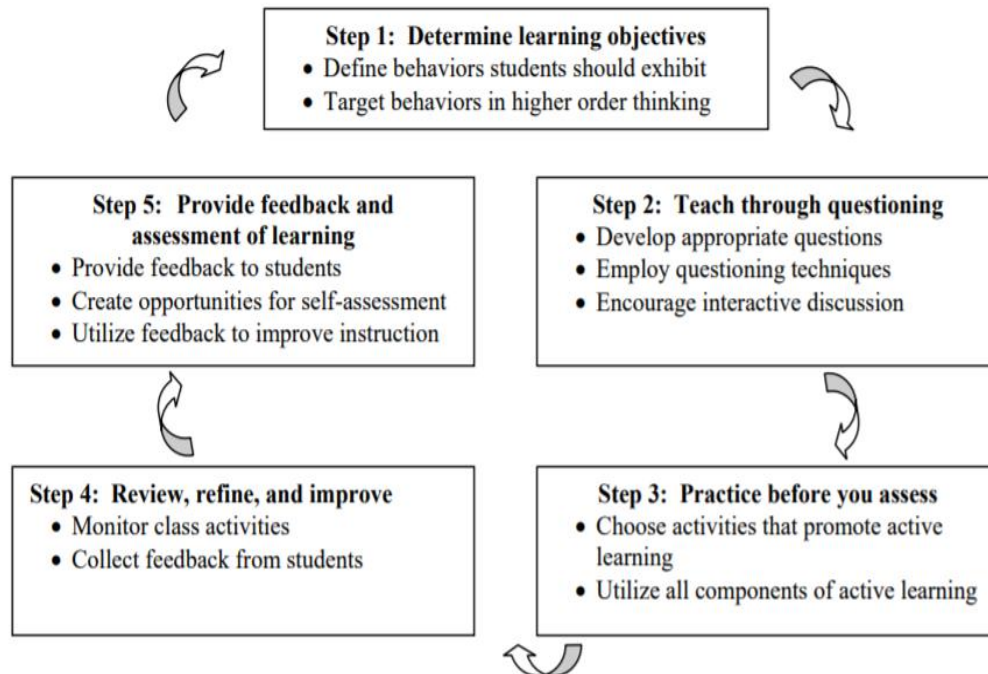
Step 1: Determine learning objectives
- Define behaviors students should exhibit
- Target behaviors in higher order thinking

Step 5: Provide feedback and assessment of learning
- Provide feedback to students
- Create opportunities for self-assessment
- Utilize feedback to improve instruction

Step 2: Teach through questioning
- Develop appropriate questions
- Employ questioning techniques
- Encourage interactive discussion

Step 4: Review, refine, and improve
- Monitor class activities
- Collect feedback from students

Step 3: Practice before you assess
- Choose activities that promote active learning
- Utilize all components of active learning

Figure 1: 5-Step Model to Move Students towards Critical Thinking

The Employer

As a sustainable social enterprise, The Picha Project is established to empower marginalised communities particularly refugees in Malaysia. Named after a 3-year old Myanmar boy Pita (Pi-Cha), the team focuses on providing a platform for the families to cater their food to the public and to equip them with professional skills in the process. Founded by three young entrepreneurs (Suzanne Ling, Kim Lim, and Swee Lin), selecting the Picha project as an employer was hoped to inspire students to focus on more impactful activities that would contribute to their learning experience at INTI International University.

The Research Question

Thus, this paper seeks to answer the question, "is it possible to enhance the use of critical thinking through an employer-relations project, called The Picha Project?". Also, this paper will suggest other possible areas for future research on how to integrate critical thinking skills and the entrepreneurial mindset into students' learning. This study will consider project-based learning through The Picha Project and how they perceived learning experience and also the development of critical thinking.

Methodology

Design of the Project (CRI2101)

CRI2101 course aims to develop students' critical analysis skills and reasoning skills, and prepare them to be problem solvers. The project is designed based on the *'5-Step Model to Move Students towards Critical Thinking'* (Duran, Limbach and Waugh, 2006) mentioned in the Introduction:

Step 1: Determine learning objectives - Students were partnered with an employer, the Picha Project in order to meet their learning objectives. In completion of the project, the students were expected to evaluate problems faced by the social enterprise and generate solutions that would help expand the business. In the process, the students were exposed to real life socio-entrepreneurial issues that they were expected to analyse. Students were also supposed to create proposals of their ideas in solving the identified issues.

Step 2: Teach through questioning - Students began by responding to a question posted by the instructors: *As a start-up company, what are the possible problems faced by the Picha Project in sustaining their business venture?* In groups, students then developed their ideas by employing *Toyota's 5 Why's* analysis in order to get to the root cause of the problem.

Step 3: Practice before you assess - In order to promote active learning, students discussed and generated their solutions in the form of an action plan presented in their proposals. The teams came up with different solutions that would help to boost the Picha Project's sales.

Step 4: Review, refine, and improve - Before the projects were executed, students were gathered to further refine their ideas and were assigned to give constructive feedback to other groups. This step was crucial to the entire project since only the best proposals (Car Boot Sale, High Tea Party, Social Media Team, Water Festival, Movie Nights, and Lunch Box Delivery) were to be chosen for execution. Students chose the team that they would like to join and were given three weeks to carry out the project.

Step 5: Provide feedback and assessment of learning - For the final step, students wrote individual reflection to assess their own experience and learning by being part of the project. They were assessed by the instructors based on their evident contribution reflected in the journal writing.
Utilisation of this framework is hoped to assist these Business majors to make sense of their learning, and provide them with practical experience that contributes to their growth as college students.

Data Collection
This research employs a mixed-method data gathering process. A total of 117 Diploma in Business (DIB) students of mixed gender were involved in the data collection process. The two methods used are: *1) Online Survey:* Students' feedback on the project were collected through a Likert-scale online survey consisting of twenty statements distributed via Google form. The statements were created to derive students' responses on their opinion of the employer project apart from gauging their interest and engagement (refer to Table 1.0):

Statements	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Project with the Picha team has taught me to overcome difficulties effectively.					

The opening sharing session by the Picha Project has motivated me to work on this project.					
The project has taught me to communicate more effectively.					
The project has improved my critical and reasoning skills.					
Working with others in the project allows me to understand different work personalities.					
During the execution of the project, working in group is more effective than working individually.					
The project made me understand the idea of social entrepreneurship.					
The project inspired me to become a social entrepreneur in the future.					
I learn a lot more through this project compared to a theory based lesson.					
The project made me realise that good marketing/business strategies are the most important factor in sustaining a business.					
I learn that teamwork is the key to a successful business.					
I believe that employer relation projects will increase my chance of employment after graduating from college.					
Employer projects could enhance my personal and professional credibility.					

I think that the use of social media ie. Facebook, Twitter, Instagram etc. is very useful in expanding a business and spreading brand awareness.					
For the project, my team utilises social media pages creatively to market the products or events.					
In the project, I find it easier to communicate with my team members because of Whatsapp/Wechat/Telegram/Facebook/etc.					
I find that Whatsapp/Wechat/Telegram/Facebook/etc are important in planning and executing the project.					
The Picha Project website is user-friendly and it eases my team to make our orders.					
The food delivery was convenient for my team members and I.					
Employer project with the Picha Team should be continued to expose students to hands-on social entrepreneurship skills.					

Table 1.0: Online Survey Questions

The other method used is; *2) Focus Group & Individual Journal Entries:* A focus group session was also held to gather more in-depth responses from selected students. Students were asked about their personal experiences and struggles in the execution process. Broader in-depth data was also extracted from the individual journal entries posted by all of the students. Responses gained were also hoped to improve the execution of similar projects in the future.

Results and Discussions

The Analysis
Statements created in the questionnaire were designed according to three major sub-sections; Problem Solving Skills, Communication Skills & Technology, and Entrepreneurship. The hypothesis was tested to induce whether the employer project is able to enhance not only the use of critical thinking and communication skills, but also it influences students' perception on their future prospect. It was determined that students responded with positive feedback when the survey was analyzed.

Problem Solving Skills

In the survey, 58.9% of the students agreed that the project has taught them to effectively overcome difficulties (refer to chart 1.0).

Project with the Picha team has taught me to overcome difficulties effectively.
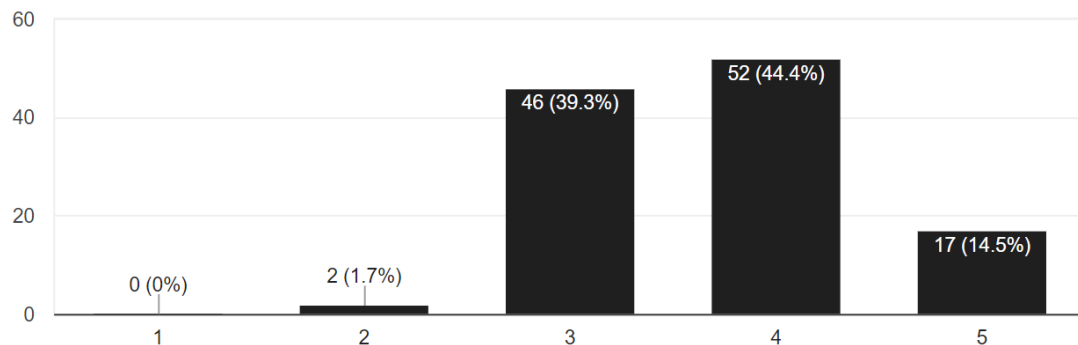
117 responses

Chart 1.0: Students' Responses on Overcoming Difficulties

Some of the challenges personally shared by the selected students involve technical issues such as transportation problem, lack of materials, and the website/order requirements. Some groups mentioned that it was quite challenging to attract customers because of several reasons such as trust issues and affordability of the items. Time constraint, lack of experience, and uncooperative members were also some of the problems the students had to deal with (refer to Table 2.0).

Issues/Problems	Excerpts from Journal Entries
Transportation	*"...there were few challenges we had to faced like transportation. Not everyone of our members have cars or lived in hostel."*
Materials	*"...We did not get to borrow extension wire on time and when everything was done, the PA system could not function."*
Website/Order Requirements	*"...there are also some mistake or accident happened when our leader making payment with Picha Project. Before we make the final payment with Picha, all of us not realized we need to pay GST. However, before few days we receive our order, our leader inform us we need to pay extra money for paying the GST but at the moment we have already collect all the payment from our customer."* *"...I first tried to place orders via the website but because the area we located was outside the delivering area. So I could not continue placing the order through it."* *"...the system does not allow me to select the delivery date on 10th April. 10th was our event actual day and I was placing the order two days before but I wondered why I failed to do so."*
Trust Issues	*"I encounter few challenges in this project which is taking orders from lecturers who do not even want to listen what I am talking about. It was*

	hard for me to deal with it most of the time…when I send my treasurer, the lecturers do not trust and want me to collect the money personally which is hard for me.”
Affordability	*“…the second which is the biggest challenge in this activity is the price of Picha Project meals is too expensive…”* *“…the Picha food were quite expensive in my opinion to be selling for students…”*
Time Constraint	*“…we didn't have enough time to promote our product and reach the customer.”*
Uncooperative Members	*“My group leader didn't tell anything to us even not reply anything in group and he just remain silent if I asked anything. All group members are waiting for the leader order so there is no interact in group.”* *“This group is lack of teamwork and just few members gave me response when choosing the movies.”*

Table 2.0: Excerpts on Students' Journal Entries

The aforementioned problems, as stated in Table 2.0, are real life entrepreneurial issues that students would most likely be facing if they decided to start up their own business. In order to succeed, students had to figure out the best way possible to solve the problems. The students also shared their experience in trying to deal with the issues. This proves that critical thinking is applied in solving real life business related issues. Throughout the process, students do not only develop better problem solving and critical thinking skills, but they also had to take on leadership roles. Based on the survey, 71.8% of the respondents agreed that the employer project helped to improve their critical thinking and reasoning skills (refer to Chart 2.0).

The project has improved my critical and reasoning skills.
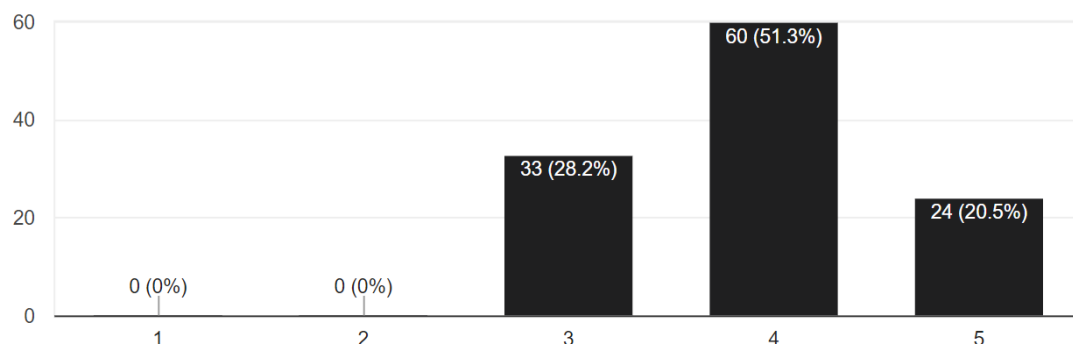
117 responses

Chart 2.0: Students' Responses on Whether the Project has Improved their Critical and Reasoning Skills

Communication Skills & Technology

Since effective communication is key to a successful business, students had the chance to improve their skills in finishing the project. 74.4% of the students agreed that the project taught them to communicate more effectively (refer to Chart 3.0).

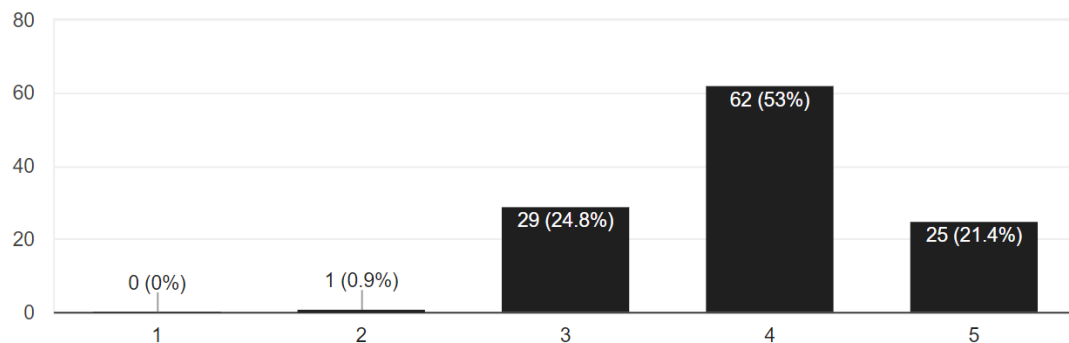**The project has taught me to communicate more effectively.**

117 responses

Chart 3.0: Students' Responses on Whether the Project has Taught them to Communicate Effectively

72.7% said that working in groups is more effective and allows them to understand different personalities (refer to Chart 4.0).

During the execution of the project, working in group is more effective than working individually.

117 responses
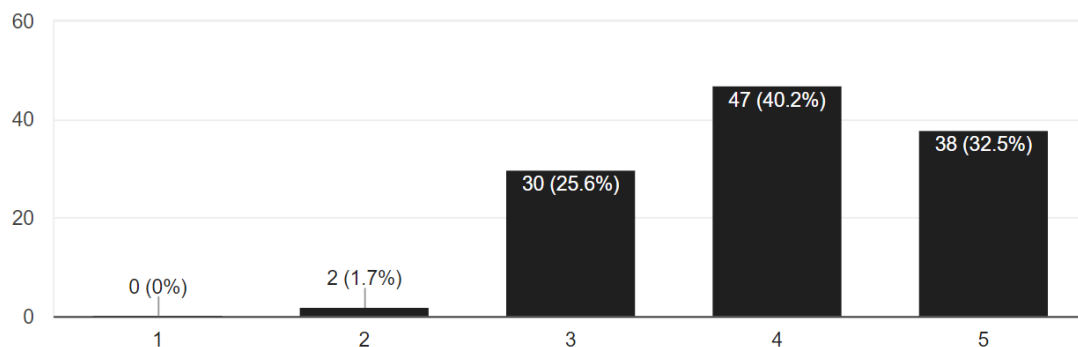
Chart 4.0: Students' Responses on the Effectiveness of Group Work

In the process, students did not only work with their respective group members, but also had to cooperate with other teams, especially the social media team that was in charge of promoting the products. Students also had the chance to practise their communication skills with a potential employer, the Picha Project. This gives students a glimpse of their future employment experience if they choose to pursue a career in Business.

The project also maximises the use of technology where technopreneurship could be applicable. Students did not only utilise their smartphones for communication purposes, but also in placing orders of the food items requested by customers apart from promoting the Picha Project on their social media platforms (refer to Chart 5.0).

I think that the use of social media ie. Facebook, Twitter, Instagram etc. is very useful in expanding a business and spreading brand awareness.
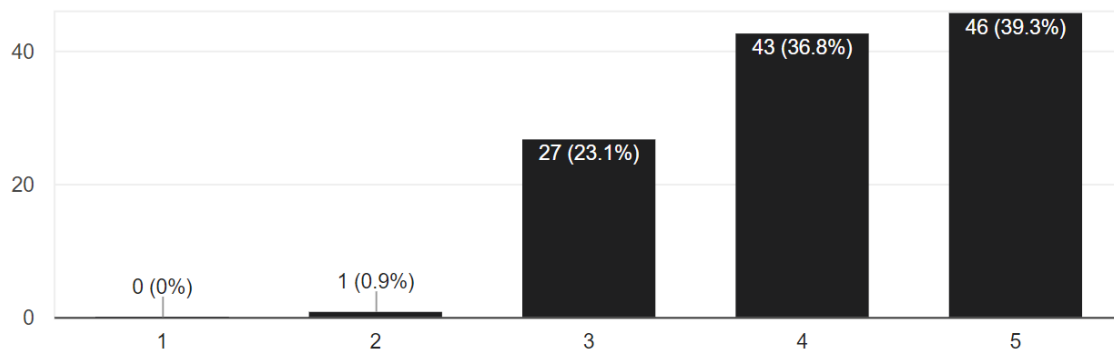
117 responses

Chart 5.0: Students' Responses on the Usage of Social Media

According to the Chart 5.0, 76.1% of the students agreed that social media is vital in expanding a business and 63.3% said that their teams utilised social media such as Facebook, Twitter, and Instagram to market the products (refer to Chart 6.0).

For the project, my team utilises social media pages creatively to market the products or events.

117 responses
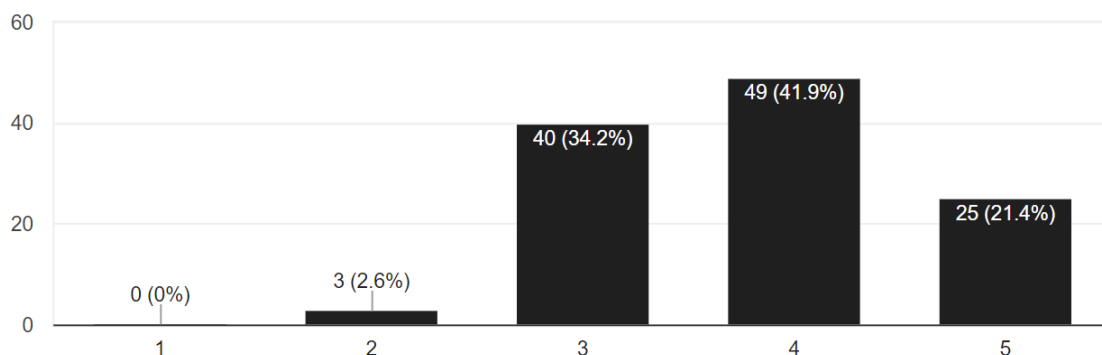
Chart 6.0: Students' Responses on their Creativity in Utilizing Social Media

As future entrepreneurs, it is important that students are equipped with skills related to technology, for example, in designing websites with great features and user interface. Working with the

employer has given the students an overview of the skills that they need to develop in becoming successful entrepreneurs as 64.9% of the students said that the Picha website is user friendly and easy to use (refer to Chart 7.0).

The Picha Project website is user-friendly and it eases my team to make our orders.
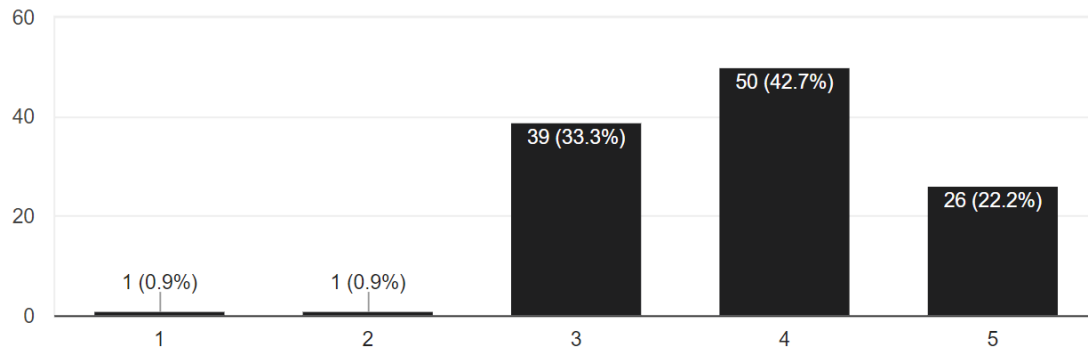
117 responses

Chart 7.0: Students' Responses on the Convenience of The Picha Project Website

Based on the conducted survey (refer to Chart 8.0),71% respondents agreed that technology plays a very important role in executing the project whilst 74.3% had the opinion that it was easier to communicate because of the advancement of technology.

I find that Whatsapp/Wechat/Telegram/Facebook/etc are important in planning and executing the project.

117 responses
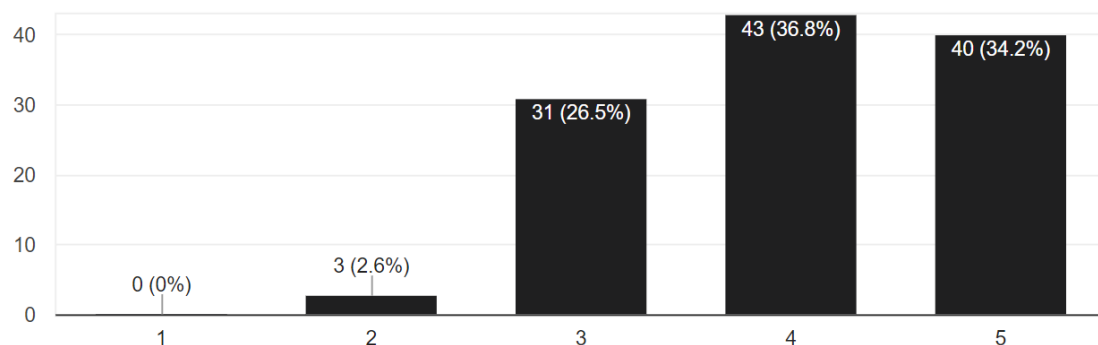
Chart 8.0: Students' Responses on the Usage of Social Media in Planning and Executing the Project

In the project, I find it easier to communicate with my team members because of Whatsapp/Wechat/Telegram/Facebook/etc.
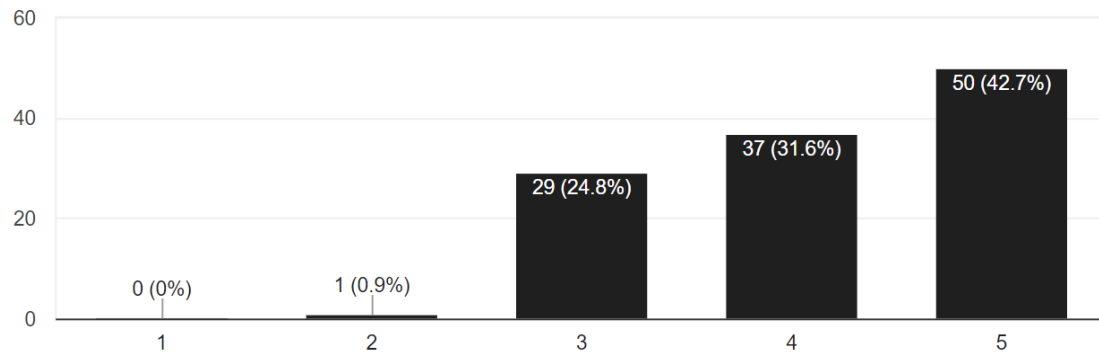
117 responses

Chart 9.0: Students' Responses on the Convenience of Social Media in Communicating with the Team Members

Charts 3.0 to 9.0 prove that integrating an employer project in students' learning experience does not only help improve their critical thinking skills, but also their communication skills apart from making them technologically equipped Business graduates.

Future Prospects
The questionnaire was also designed to obtain students' opinion on the employer project's benefit on their future career, especially in the entrepreneurial field. Based on Chart 10.0, 64.9% of the respondents agreed that their involvement with the employer project would enhance their professional credibility, and 66.7% said that they believe the employer project would increase their chances of employment (refer to Chart 11.0).

Employer projects could enhance my personal and professional credibility.
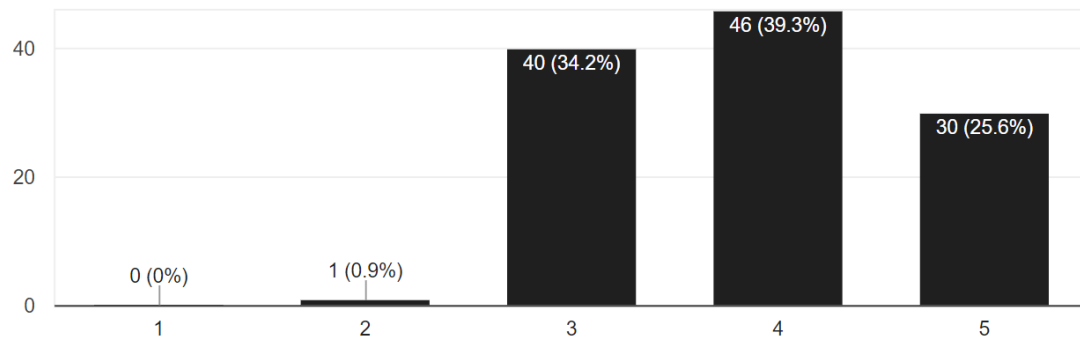
117 responses

Chart 10.0: Students' Perception on Whether the Project would Enhance their Personal and Professional Credibility

I believe that employer relation projects will increase my chance of employment after graduating from college.
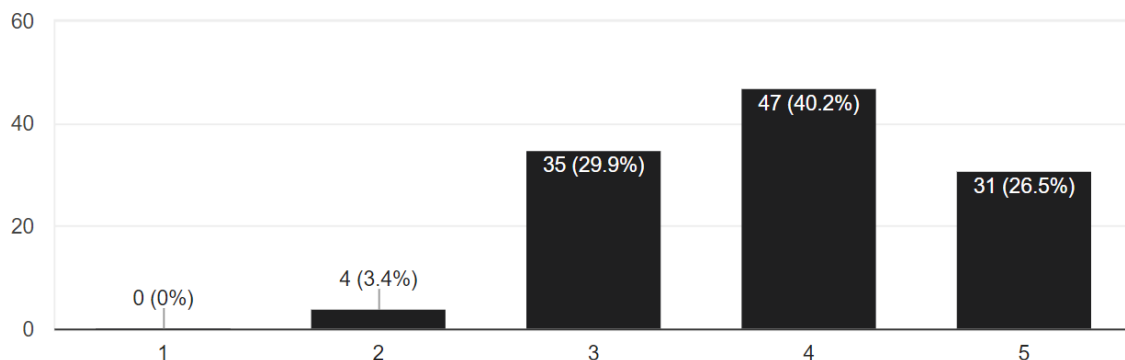
117 responses

Chart 11.0: Students' Perception on Whether the Project will Increase the Chance of Employment after Graduation

66.6% of the students claimed that the project helped them in understanding the idea of social entrepreneurship (refer to Chart 12.0), and 55.6% were inspired to become a social entrepreneur (refer to Chart 13.0).

The project made me understand the idea of social entrepreneurship.
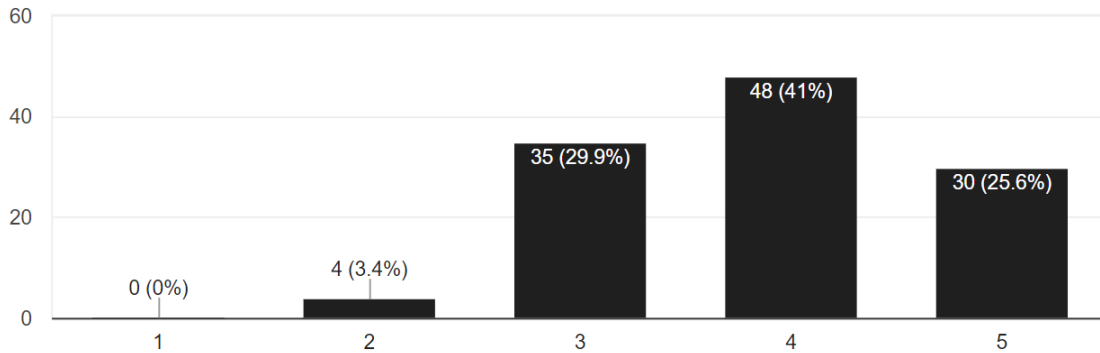
117 responses

Chart 12.0: Students' Reponses on their Understanding of the Idea of Social Entrepreneurship

The project inspired me to become a social entrepreneur in the future.
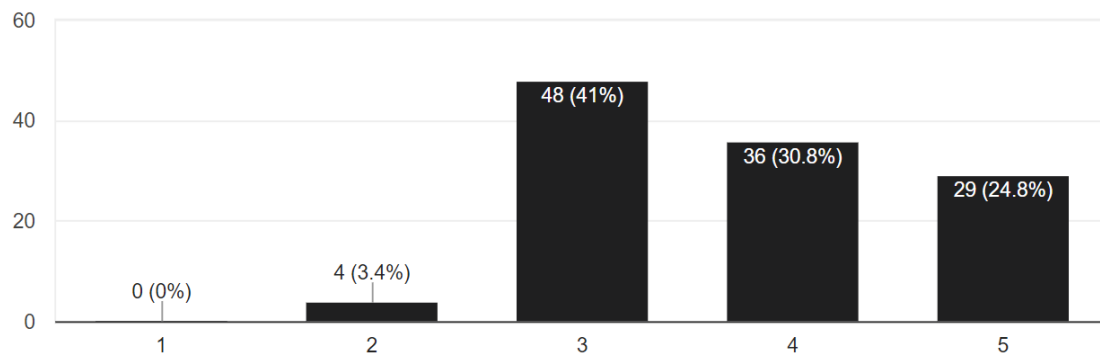
117 responses

Chart 13.0: Students' Responses on Whether the Project Inspires them to be a Social Entrepreneur in the Future

The responses from Charts 10.0 to 13.0 clearly show that students give positive feedback towards the employer relation project. 64.1% agreed that they learn more by executing a project with the Picha team compared to being in a theory-based lesson, making employer relations project a great medium for students to learn (refer to Chart 14.0).

I learn a lot more through this project compared to a theory based lesson.
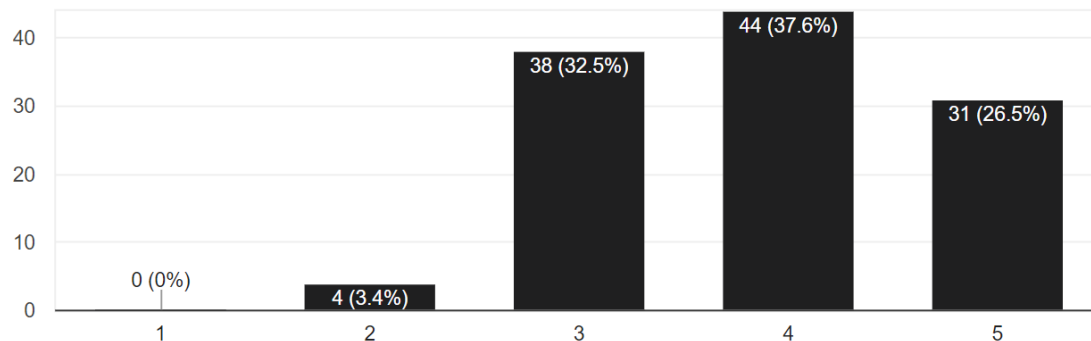
117 responses

Chart 14.0: Students' Perception on Employer-Relations Project versus Theory Based Lesson

Conclusions

Since this study employs a mixed-method data collection, results gathered have provided us a deeper insight on students' experiences throughout the journey. The triangulation of data (survey questions, focus group discussion, and online journal writing) concludes that critical thinking skills can be enhanced through an employer-relations project, The Picha Project. The use of this project in critical thinking course has proven to promote critical analysis, reasoning and problem solving skills. On top of that, students obtain additional learning qualities through the project, such as entrepreneurship, teamwork and communication, which can only be obtained through hands-on experience. These skills may be viewed as significant in achieving the 21st century competencies, which are very much needed for survival and success in their future careers. The employer-relations project with the Picha Project may be revised to provide more opportunity for greater critical thinking and problem solving practice and development to take place. This includes longer duration for students to execute their proposals. Further research may be useful to determine how students analyze, assess and evaluate their thinking processes in the execution of the Picha Project.

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