

My topic is "The Brown Macroalgae *Sargassum* canopy effect on the morphology of Hermatypic corals". The most interesting part is that I can learn diving in order to collect data as I need to take photos of corals in the field. Diving is indeed so much fun that apart from working, you can also have a glance of other interesting marine organisms too.

As mentioned above, I have learnt diving of course. Apart from diving, I also learnt skills of photo analysis and how to operate some lab apparatus.

The main difference between FYP and lecture is that FYP involves many practical actions. For example, you need to go into the field by yourself to obtain your own data. Also, you need to totally rely on yourself and there's no one going to remind you when to do the things so time management is also very important.

At first, diving could be quite difficult as I am not really familiar with the skill at that time. However, practice makes perfect. After a few times of diving, I finally can dive better.



The topic of my FYP is Feeding Ecology of Yellow-crested Cockatoo (*Cacatua sulphurea*) in Hong Kong. During my research, I have designed various surveys for collecting information about details of feeding and roosting ecology of the critically endangered Yellow-crested Cockatoo, for example the food types and feeding frequencies of the species.

From this FYP, I have learnt to work independently. It is because unlike usual laboratory sessions or lectures which usually have clear guidelines from teachers, as an FYP student I have to search for literatures and to design experiments for the project by myself. During the experiments, there may be some problems occur and I have to solve them by myself, too. (Although my supervisor is always helpful if I really can't deal with the problem by myself) This increases my problem-solving ability, too.

In fact, all the moments in my FYP made me feel unforgettable because FYP is really a brand new experience for me. In my previous school lives, I had never tried to do a whole project all by myself, from designing experiments to data analysis, and finally the report and presentation. Also, I feel lucky that I have such a precious chance to choose a topic that I am really interested in, which is about parrots. As a parrot keeper, I feel really great to observe the wild parrot population and their behaviors.

As I mentioned before, FYP has taught me to work independently. In addition, in order to perfectize the research, I have also learnt to cooperate with my supervisor well, which is also very important in my career later because good communications between employer and employee is always preferred by most of the bosses.

Finally, I really want to give many thanks to Prof. Chu Lee Man, who is my FYP supervisor. He has given me a lot of useful advices and has given me helping hands each time when I encounter big and small problems. He has also given me a lot of support throughout my research. Special thanks are also extended to Dr. Chung Kwok Cheong, who has given me many useful information and suggestions for me to make my FYP a better research project; and also to my dearest labmates who have helped me to make good presentation and reports.





- What is your topic? Is there interesting things in your FYP?

My topic is about the heat-shock response in intertidal barnacles. To study this, I need to collect lots of barnacles from the seashore, and I love doing fieldwork! I got familiar with many other intertidal organisms besides barnacle, and tried snorkeling in the gaps between sampling periods.

- What have you learnt?

I have learnt some common molecular techniques, such as DNA extraction, RNA extraction, reverse transcription, etc. I also learnt to design primers, analyze data, and present my progress to others.

- Differences between FYP and lectures

When doing FYP, you can take your own pace, but you need to dive deeper into your area. It can be quite stressful, especially when you cannot fully express your stress to your friends who are not involved in the projects. In one word, you will taste the feeling of being an independent and responsible researcher.

- Any difficulties you come across? How did you overcome?

My experiments failed countless times. Sometimes successful trouble-shooting brought me great joy, but most causes remain mysterious. Looking back now, they are not that severe. So just stay calm and optimistic, and get down to work. And remember, there are always mentors to help you =]



What is your topic?

- I am dealing with the molecular phylogenetics of portunid crabs, which are commonly known as the swimming crabs. In short, molecular markers are used to infer the evolutionary history of portunid crabs.

Is there interesting things in your FYP?

- I have to collect different species of portunid crabs. So I often have chances to visit different habitats in Hong Kong. Crab hunting is really a lot of fun because I have a chance to play with crabs and get in touch with beautiful wild environment. I also got an opportunity to work in a lab at the University of Regensburg, Germany for two months during the summer vacation. I had an enjoyable stay there.

What have you learnt?

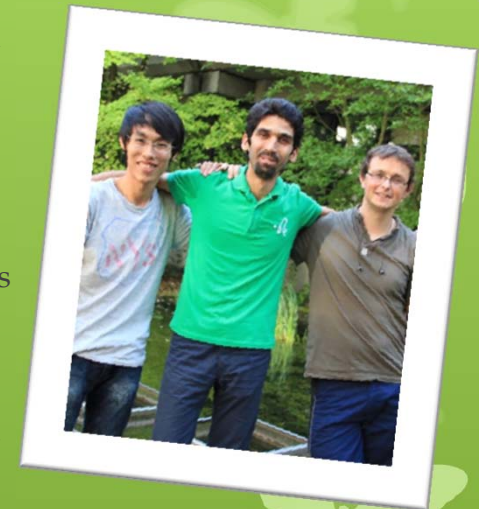
- I have learnt how to conduct experiments and to solve problems independently. Also, I have learnt a lot about crabs, crab hunting and evolution.

Differences between FYP and lectures

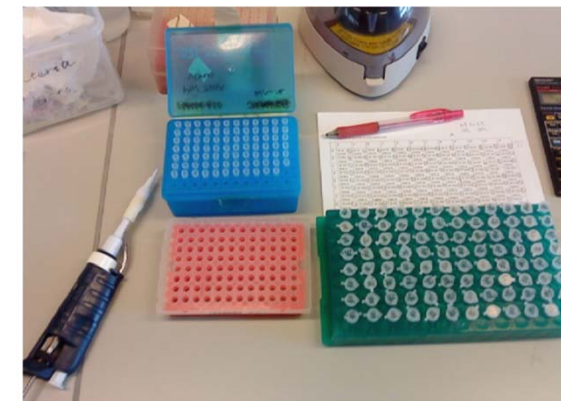
- If you decide to conduct a FYP, you have to be committed and responsible to your own project. You have to plan things beforehand, monitor your progress and report your progress regularly. Sometimes you have to solve problems by your own although your supervisor and lab mates can always provide help. On the other hand, attending lectures is less demanding and most of the time you just receive knowledge passively. But you have to be self-motivated in doing FYP.

Any difficulties you come across? How did you overcome?

- One of the major problems is about collecting different species of crabs. The more the crabs species I collected, the clearer the picture about their evolutionary relationships I can get. Initially I could only collect quite few crab species. But later I get more crab samples from our collaborator Prof. T. Y. Chan in Taiwan. I want express my grateful thank to him here.



- In my FYP, the raw materials being study are saliva donated by patients supplied by the Sha Tin Hospital. I am so excited to study anything about human! And bipolar disorder is a kind of affective disorder. Though the laboratory skills required for this study are not very challenging, yet the topic is very interesting.
- Technically, I've learnt to handle and extract DNA from human saliva. Also, our lab technician taught me the proper lab manner throughout the project. More importantly, this project trains me to analysis results obtained from the experiments and orderly present them out. Besides, a lot of papers and references are needed to be read for understanding the whole picture. I am now more used to find and learn from those peer-reviewed papers.
- Lectures most probably require you to understand the content presented by the lecturers. But FYP requires laboratory work to test a hypothesis/ find out an answer. FYP includes some unknowns that need us to figure out no matter through experiments or reading papers, in which it trains us how to solve a question and construct a complete story by our own (of course with the advices given by our supervisor)
- I think that the biggest difficulty is I had no idea how to start at the beginning of the project. Though my supervisor gave me a brief introduction about the project background and direction, due to lack of experience and background understanding about that field, I was very confusing and didn't know how and where to start.
- But every time, after discussing with my supervisor, I had a clearer mind. Also, as you were continuing with your lab work and reading more related papers, you started knowing what you are doing. Then when you finally started analyzing data and prepared the presentation/thesis, a more complete picture could be obtained. I think the key point is we need time to understand the project.



My FYP is originally focusing on zebrafish ovary culture. However after few days of culture, some unexpected cells emerged in the cultured ovary. Interests were then drawn to identify and characterize those unexpected cells.

In my FYP project, I need to almost perform like a postgraduate student. Base on the topic given by my supervisor, I need to decide the direction, decide the experiments and learn the technique by myself. This really enriches my horizon in the research field because I need to read through a lot of materials to choose the one that suitable.

From my points of view, the main difference between FYP and lab session is the uncertainty. In student lab, what you need to do is just repeating an already successful experiment. However, in FYP, you will encounter a lot of failure, a lot of unexpected results and you need to figure it out by yourself. Mostly, you need to search publication from other scientists or ask the postgraduate or even the supervisor for the answers. If nobody knows the answer, then I need to decide experiment to test the possible answers by myself. Definitely, this process is really time-consuming.

I still remembered that in this FYP, I had tried to spend my whole day till mid-night for experiment. Sometimes I was with another student and sometimes I just do it alone. Undoubtedly, it was so tired to do whole day lab but I can get a strong sense of fulfillment when I got the expected results. In fact, I think I should thank to not only my supervisor but also my lab mates for their kind reminder and patience to teach me.

Being a scientist is not easy. There is no guarantee of job, no guarantee of salary and even no guarantee of good results. You may face a lot of difficulties and concern when you are thinking of being a scientist. You may have very little time for your family, for your friends and other interests once you dedicated into it. As compensation, you can be the one to discover the mystery of life. So I suggest people that want to persuade their postgraduate study in this field to think clearly whether you can sacrifice for the research. If you are not sure about that, having experience on FYP will be a good option for you.

