Covid-19, MCO put PhD students in a dilemma

RAYYAN RAFIDI
rayyan.rafidi@nst.com.my

DOCTORAL students in universities nationwide are struggling to navigate the disruption to their research caused by the Movement Control Order (MCO) to curb the spread of Covid-19.

It is not possible for them to work in the laboratory or at their place of residence, says Dr Heo Chong Chin, a senior lecturer at the Medical Microbiology and Parasitology Department of Universiti Teknologi Mara's (UiTM) Medical Faculty.

Dr Heo Chong Chin

"A controlled environment is required to minimise contamination or other abiotic factors, which may potentially affect their experiment results.

"Many experiments require precise measurements using highly sensitive laboratory tools and equipment," he said.

Universiti Putra Malaysia (UPM) Biotechnology and Biomolecular Sciences Faculty lecturer Associate Professor Dr Nurulfiza Mat Isa said the pandemic had jeopardised her students' research in many ways.

"A research relies on a sequence of connected steps and, for the most part, the procession from one step to another cannot be delayed.

"Challenges include difficult access to research materials and laboratories, which requires modifications to research protocols.

Najwa Syahirah Roslan

"Common laboratory kits and reagents may be prioritised for use in the frontlines to test for Covid-19," said Nurulfiza, who also heads the UPM Institute of Bioscience's Vaccines and Immunotherapeutics Laboratory.

For fourth-year UPM microbial biotechnology doctoral student Najwa Syahirah Roslan, 27, her experiments had reached a crucial step for data verification.

"Before the MCO was implemented, I was conducting in vitro work on the primary culture of chicken embryo cells derived from specific pathogen-free (SPF) eggs.

"The limited lifespan of cultured primary cells derived from live organ tissues requires me to prepare a new batch of cells every two weeks. The egg production has been halted due to the MCO."

Previously, she planned to complete her research in genome engineering by this month before submitting her thesis in August.

"I am all for helping in the fight against Covid-19 by staying indoors. However, the uncertainty of the situation has made me a little anxious. For now, my research focus remains, although there are uncertainties.

"I hope the university will be flexible in its thesis submission protocols for research based students so we can have time to analyse our results.

"As others try to find a cure for the pandemic, finishing my thesis is also a race against time for me," said Najwa Syahirah.

UiTM Applied Science Faculty student Muhammad Zharfan Mohd Halizan, 29, had been studying solid state physics of perovskites for the past two years.

"I have been working on improving solid state material properties to enhance the performance of electronics and optoelectronic devices."

Before the MCO, he was busy preparing samples and conducting characterisation experiments in the lab.

Now, he is facing a major setback after his access to lab facilities had been restricted.

"I had to reschedule my sample preparation and characterisation experiments. My team's inability to hold discussions with lecturers, lab mates or industry players in person is another obstacle.

"However, I can use my data from previous lab work to write a literature review for my thesis and scientific publications," he said.

Despite his passion for research, Zhafran admitted that he was facing one of the most challenging period in his quest for a doctorate.

"Students who are financially dependent on part-time work are struggling. I hope universities will consider the students' plight by reducing tuition fees or providing other forms of support to help us complete our studies."

UiTM Medical Faculty student Nur Adilla Zaini, 29, had to reschedule six months of lab work arrangements in her forensic microbiology and entomology research.

Test tubes at the Universiti Putra Malaysia Biotechnology and Biomolecular Sciences laboratory. Access to laboratory facilities have been restricted during the Movement Control Order.

"Instead of working in the lab, I now spend time in front of the laptop writing and reading journals.

"Honestly, I am navigating through uncertainties right now, but I'm grateful to have supervisors who are always available to help me," she said.

According to Nurulfiza, some students were allowed to continue part of their critical scientific experiments in UPM.

"My students who are involved with experimental animal trials are allowed to continue with animal care with permission from the university."

The current situation did not mean students should stop working completely, she said.

"In general, dry lab analysis and thesis writing is encouraged.

"Students still early in their PhD studies may revise their research content to ensure that they can deliver on time. But for those in the final stage, a deferment may serve as a good alternative.

"Faculties can support students through counselling services, alternative working schedules for critical experiments and online meetings to keep students motivated," said Nurulfiza.

According to Heo, students in forensic entomology studies were required to do fieldwork and conduct laboratory experiments.

"One of my PhD students had to stop all her lab work and chemical purchases, while an international student could not return to Malaysia.

"Another postgraduate student is now rearing two blowfly colonies at home as she is not able to access the insect room on campus."

Universities and lecturers were working hard to help affected students, he said.

"Supervisors will continue to monitor students online and conduct virtual laboratory meetings.

"My PhD students are writing their manuscripts and we have submitted two articles for publication. Other students are working on their proposal presentation slides.

"Personally, I don't think students need an extension because it is up to how they manage their time efficiently."

With a student who is due for a viva voce scheduled later this month, Heo said: "In my opinion, the examination committee can postpone or conduct it online.

"There are many online meeting tools, so it should not be an issue."

UiTM Applied Sciences Faculty senior lecturer Dr Zakiah Mohamed also noted the practicality of online viva voce sessions.

"I think the university may adapt an online assessment system. Video conferencing will probably be the best way to coordinate the session."

Zakiah added that a research extension was possible if students encountered major disruptions in their work.

"Students are now encouraged to reschedule their research timeline to continue their work at home. They can pivot their work plan to adapt to these new challenges."