

# ABSTRACT

## RESEARCH FESTIVAL 2020

**Worldwide Pandemic the 1st day**  
**What should we do if the global pandemic happens?**

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FPT University,  
Ho Chi Minh City, Vietnam

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October 10<sup>th</sup> - 11<sup>th</sup>, 2020

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# INTRODUCTION

**Research Festival** (RESFES 2020) is a specialized contest to share and exchange knowledge and experience about science – technology, business administration, languages, etc. between students of FPT Education and other universities.

Facing the global Covid-19 crisis, the theme of the **RESFES 2020** is: **“Worldwide Pandemic the 1st day”/What should we do if the global pandemic happens?** Solutions for every aspect of societies such as economics, medical healthcare, technology, etc. will become the main requirement for each team to conduct scientific research in 4 fields including: Information Technology, Graphic Design, Business Administration and Languages.

RESFES 2020 is co-organized by the Office of Science Management and International Affairs under FPT Education and FPT University Ho Chi Minh City campus in Ho Chi Minh City, Vietnam on October 10<sup>th</sup> – 11<sup>th</sup>, 2020.

## WELCOME LETTER

We are pleased to welcome you to the **Research Festival** (RESFES 2020) which will take place on October 10<sup>th</sup> – 11<sup>th</sup>, 2020 at FPT University Ho Chi Minh City campus in Ho Chi Minh City, Vietnam.

We would like to express our sincere thanks to all the individuals who would contribute to **RESFES 2020** in all kinds of ways. We highly appreciate the contributions of the Keynote Speakers, all the authors, as well as the Program Committee members and reviewers. Their high competence, enthusiasm, time, and expert knowledge, enabled us to prepare the high-quality final program and helped to make the contest successful. We welcome suggestions and comments and we are looking forward to meeting you next time.

Besides, you will also have the opportunity to visit FPT University, Ho Chi Minh City campus that has green space, stimulates students to study, and inspires creativity.

We hope **RESFES 2020** will become an exciting and memorable scientific contest!

**RESFES 2020** Organizing Committees.

# AGENDA

## FPT EDUCATION RESEARCH FESTIVAL

Ho Chi Minh City, Vietnam, October 10<sup>th</sup> - 11<sup>th</sup>, 2020



### FPT University, Ho Chi Minh City Campus

D1 Street, Saigon High-tech Park, Long Thanh My Ward, District 9, Ho Chi Minh City

October 10 <sup>th</sup> , 2020				
08:00 – 08:45	<b>Registration and Guest Welcome</b> <b>Location:</b> Library			
08:45 – 09:00	<b>OPENING CEREMONY</b> <b>Location:</b> Library			
09:00 – 09:45	<b>Keynote 1 Presentation</b> <b>Location:</b> Library			
09:45 – 10:30	<b>Keynote 2 Presentation</b> <b>Location:</b> Library			
10:30 – 11:00	<b>TEABREAK AND GROUP PHOTO</b>			
11:00 – 11:45	<b>SHOWCASE AND POSTER</b>			
11:45 – 13:15	<b>LUNCH</b>			
13:30 – 17:00	<b>Session A</b> <b>Information Technology</b>	<b>Session B</b> <b>Business Administration</b>	<b>Session C</b> <b>Graphic Design</b>	<b>Session D</b> <b>Language</b>
14:30 – 15:00	Talk: 1A	Talk: 1B	Talk: 1C	Talk: 1D
14:30 – 15:00	Talk: 2A	Talk: 2B	Talk: 2C	Talk: 2D
14:30 – 15:00	Talk: 3A	Talk: 3B	Talk: 3C	Talk: 3D
15:00 – 15:30	<b>TEA BREAK</b>			
15:30 – 16:00	Talk: 4A	Talk: 4B	Talk: 4C	Talk: 4D
16:00 – 16:30	Talk: 5A	Talk: 5B	Talk: 5C	Talk: 5D
	Talk: 6A	Talk: 6B	Talk: 6C	Talk: 6D
19:00 – 20:30	<b>GALA DINNER</b>			

## October 11<sup>th</sup>, 2020

08:15 – 12:00	Session A Information Technology	Session B Business Administration	Session C Graphic Design	Session D Language
08:15 – 08:45	Talk: 7A	Talk: 7B	Talk: 7C	Talk: 7D
09:45 – 09:15	Talk: 8A	Talk: 8B	Talk: 8C	Talk: 8D
09:15 – 09:45	Talk: 9A	Talk: 9B	Talk: 9C	Talk: 9D
09:45 – 10:00	<b>TEA BREAK</b>			
10:00 – 10:30	Talk: 10A	Talk: 10B	Committee Meeting	
10:30 – 11:00	Talk: 11A	Committee Meeting		
11:00 – 11:30	Committee Meeting			
11:30 – 12:00	<b>CLOSING AND AWARDS CEREMONY</b> Location: Library			
12:00 – 13:30	<b>LUNCH</b>			



### LIST OF TOPICS IN INFORMATION TECHNOLOGY SESSION

<b>1A</b>	<p><b>Title:</b> A Decision Support Tool for Multi-Objectives Resource-Constrained Project Task Schedule Problem in Software Development Project</p> <p><b>Student(s):</b> Hoang Duc Binh, Nguyen Ba Son, Nguyen Hoang Son, Vu Tri Hien, Kieu Quoc Tuan – RCPSP Team, FPT University, Ha Noi</p>
<b>2A</b>	<p><b>Title:</b> AI in building chicken disease management systems</p> <p><b>Student(s):</b> Pham Quoc Nghi, Le Thanh Nhan, Truong Thi Thanh Xuan, Huynh Thi Nhien - PODD Team, FPT University, Can Tho</p>
<b>3A</b>	<p><b>Title:</b> Automatic Hand Sanitizer</p> <p><b>Student(s):</b> Nguyen Thai Binh, Tran Duc Hau, Pham Thanh Toan, Son Le Quoc Hung – Virus-Sys Team, BTEC FPT College</p>
<b>4A</b>	<p><b>Title:</b> Apply artificial intelligence to control and use the smart home system</p> <p><b>Student(s):</b> Le Thanh Tung, Nguyen Viet Hoang, Nguyen Tran The Anh – BigNewbieBoi_AI Team, FPT School, Da Nang</p>

5A	<p><b>Title:</b> A Decision Support Tool for Multi-Objectives Preferences-Constrained Teaching Assignment Problem</p> <p><b>Student(s):</b> Phan Lac Duong, Doan Van Thang – WG-FPTUHN Team, FPT University, Ha Noi</p>
6A	<p><b>Title:</b> Detection of invertebrate virus carriers to prevent emerging pandemic-prone disease in tropical countries</p> <p><b>Student(s):</b> Daeniel Song Tze Hai – Exodus Team, UOW Malaysia, KDU Penang University College, Malaysia</p>
7A	<p><b>Title:</b> Suggesting the suitable learning path through tracking students' reading and comprehension process in Community Learning Forum (CLPF)</p> <p><b>Student(s):</b> Huynh Kim Tri, Nguyen Tan Luat, Nguyen Trieu Duy, Vu Thien Hai – CPLF Team, FPT University, Ho Chi Minh</p>
8A	<p><b>Title:</b> Ai Based System For Cheating Prevention In Online Examination Under Covid-19 Pandemic</p> <p><b>Student(s):</b> Tran Phuong Dong, Tran Van Chuong, Ho Ngoc Vinh Han, Vo Van Hieu, Huynh Thi Nhat Uyen – CheatPlease Team, FPT University, Da Nang</p>
9A	<p><b>Title:</b> Blockchain-based Traceability in Medical Products Supply Chain Management</p> <p><b>Student(s):</b> Nguyen Vuong Khang Hy, Dao Anh Tuan, Pham Van Trong Nhan, Nguyen Huynh Tuan Khoi, Nguyen Cao Phong - Tanky Miners Team, FPT University, Can Tho</p>
10A	<p><b>Title:</b> The Covid-19 supporting, tracking, analyzing website</p> <p><b>Student(s):</b> Trinh Quang Hien, Doan Duc Tin, Nguyen Xuan Huy, Nguyen Quoc Hung – HTH Team, FPT University, Da Nang</p>
11A	<p><b>Title:</b> FU Covid-19 AI Agent built on Attention algorithm using a combination of Transformer, ALBERT model, and RASA framework</p> <p><b>Student(s):</b> Nguyen Van Thai, Phung Duc Thang, Tran Duy Dat, Tran Thi Thuy Nguyen, Luu Viet Ha, Tran Duy Anh, Pham Tuan Anh, Bui Lam Loc, Nguyen Tan Viet – Sap-Lab NLP Team, FPT University, Ha Noi</p>

## LIST OF TOPICS IN BUSINESS ADMINISTRATION SESSION

<b>1B</b>	<p><b>Title:</b> Exploiting Coronavirus to raise environmental awareness</p> <p><b>Student(s):</b> Pham Tuan Thanh, Le Phuc Huy, Pham Van Phong, Nguyen Van Phong – BIT Team, BTEC FPT College, Ho Chi Minh</p>
<b>2B</b>	<p><b>Title:</b> Using Self Check-In / Self Check-Out at hotels in Mekong Delta: perception, reality and trend in the context of Covid-19 pandemic</p> <p><b>Student(s):</b> Nguyen Ha Ai My, Luu Pham Thao Nguyen, Nguyen Thi Anh Thu, Le Minh Anh – Wonder Mint Team, FPT University, Can Tho</p>
<b>3B</b>	<p><b>Title:</b> Sustainable Indexes for Assessing Unemployment problem using A Hybrid Multi-Criteria Decision-Making Model</p> <p><b>Student(s):</b> Nguyen Hong Phuc, Vu Anh Duc, To Bach Viet, Le Van Nam, Nguyen Khanh Chi – Solutions Team, FPT University, Ha Noi</p>
<b>4B</b>	<p><b>Title:</b> Citizens' Intention to use E-government and Recommendations for further developments under Covid-19 Pandemic: An empirical evidence of Danang City</p> <p><b>Student(s):</b> Le Bao Tran, Huynh Thi Nhu Quy, Kieu Viet Anh Duy, Huynh Hoang Kim, Nguyen Minh Ngoc – 404 Not Found Team, FGW, Da Nang</p>
<b>5B</b>	<p><b>Title:</b> Learning Behavior Changes Of Students' Fpt Polytechnic During The Covid-19 Pandemic</p> <p><b>Student(s):</b> Ha Quang Vu, Do Ngoc Bich, Nguyen Long Dat, Do Phuong Thao – Northern Bee Team, FPT Polytechnic, Ha Noi</p>
<b>6B</b>	<p><b>Title:</b> The research and solutions help to enhance learning online quality in the context outbreak of covid19 global pandemic</p> <p><b>Student(s):</b> Tran Ngoc Phu, Le Tran Gia Bao, Ho Thi Thanh Ngan – BA1401-02-FUCANTHO Team, FPT University, Can Tho</p>
<b>7B</b>	<p><b>Title:</b> COVID-19 pandemic: The behavioral psychology behind panic buying and its socio-economic impacts in Vietnam</p> <p><b>Student(s):</b> Bui Nguyen Quang Huy, Dinh Nguyen Hoang Tam, Le Nguyen Huu Quoc, Hoang Van Hoan, Nguyen Minh Tuan, Hoang Phuoc Thanh, Pham Thi Thanh Thanh, Ha My Linh, Nguyen Thi Quynh Nhu – Kalmadeus Team, FPT University, Ho Chi Minh</p>
<b>8B</b>	<p><b>Title:</b> The pandemic and the global economy: Exploring issues and solutions</p> <p><b>Student(s):</b> Tran Thi Minh Chau, Le Thi Thu Hien, Duong Thi Ngoc Mai, Le Thi Hien, Nguyen Tien Son, Vo Nhu Hoa – The Magnus Team, FPT University, Da Nang</p>

9B	<p><b>Title:</b> Healthy Lifestyle of Vietnamese Undergraduate Students in COVID-19 and Implications for Marketing</p> <p><b>Student(s):</b> Pham Hoang Thu Uyen – Block Boost Team, FPT University, Ha Noi</p>
10B	<p><b>Title:</b> Factors influencing learners' participation in E-learning</p> <p><b>Student(s):</b> Doan Kim Loan, Dao Quang Thu, Tran Nguyen Thuan, Vu Tung Linh – Lumos Team, FPT University, Ho Chi Minh</p>



## LIST OF TOPICS IN GRAPHIC DESIGN SESSION

1C	<p><b>Title:</b> Communicate information of worldwide pandemic by graphics for children</p> <p><b>Student(s):</b> Le Nguyen Xuan Dieu Phuc, Vo Nguyen Mai Thy, Truong Nhat Tuan, Vu Minh Quan, Le Nguyen Hai Thuong – Gravity Team, FPT University, Ho Chi Minh</p>
2C	<p><b>Title:</b> Smartphone Application for People with Mild Depression to Activate Their Physical Lives During Pandemic Pressure</p> <p><b>Student(s):</b> Tran Vu Thao My, Bach Le Diem Quynh, Nguyen Hoang Nhi, Le Dao Lan Truc, Le Tuyet Nhi - Fire Flamingo Team, Van Lang University</p>
3C	<p><b>Title:</b> An application that can support users in understanding skin knowledge, finding suitable skincare products, and maintaining a healthy lifestyle for the skin</p> <p><b>Student(s):</b> Luu Xuan Hieu, Ngo Thi Lan Anh – Lys Team, FPT University, Ha Noi</p>
4C	<p><b>Title:</b> Contribution to vaccine research and manufacturing fund</p> <p><b>Student(s):</b> Nguyen Thi Thanh Thao, Thai Tran Thanh Tu – Hope Team, FPT Polytechnic, Da Nang</p>
5C	<p><b>Title:</b> Animated Poster: Actions In Worldwide Pandemic</p> <p><b>Student(s):</b> Duong Thi Van Huong, Tran Hoang Phong, Nguyen Le Anh Huy, Nguyen Quoc Loc, Vo Tran Hieu Bang, Pham Thien Thai An – AcE Team, FPT University, Can Tho</p>
6C	<p><b>Title:</b> Research about children's activities during quarantine time</p> <p><b>Student(s):</b> Dao Le Nhat Tan, Ho Thi Thanh Thao, Le Nguyet Song Thu, Tran Thien Phuc, Nguyen Dang Dung, Do Ngoc Khanh Uyen, Huynh Thien Nhan, Nguyen Phuc Thien An – Bat Quai Sai Gon Team, FPT University, Ho Chi Minh</p>
7C	<p><b>Title:</b> Research and solutions to helping protect families during a pandemic</p> <p><b>Student(s):</b> Hoang Trong Tung, Nguyen Dinh Phuc – Sunflower Team, FPT Polytechnic, Da Nang</p>



8C	<p><b>Title:</b> Applying street art graffiti in Corona virus preventive propaganda</p> <p><b>Student(s):</b> Pham Nguyen Anh Duy, Nguyen Thi Tuong My, Ho Hoang Chi Bao, Nguyen Nguyen Kim Ngan, Chau Dai Thanh – Stories Team, BTEC FPT College, Ho Chi Minh</p>
9C	<p><b>Title:</b> Using Comic for Health Education before and after the Covid-19 pandemic</p> <p><b>Student(s):</b> Lam Tran Minh Anh, Nguyen Nguyet Tu – JS Team, FPT University, Can Tho</p>



## LIST OF TOPICS IN LANGUAGE SESSION

1D	<p><b>Title:</b> Factors influencing second language acquisition of university student</p> <p><b>Student(s):</b> Doan Kim Loan, Tran Dinh Thanh – GustO Team, FPT University, Ho Chi Minh</p>
2D	<p><b>Title:</b> The Significance of Language in Encountering Pandemic Ravaging the World</p> <p><b>Student(s):</b> Quach Khanh Nhan, Le Nguyen Khanh Huyen – Language Solutions, Nguyen Tat Thanh University</p>
3D	<p><b>Title:</b> Order that seems to be disordered: Students’ metacognition in online English classes at FPT University</p> <p><b>Student(s):</b> Nguyen Thanh Dat, Phung Trieu Vy – Flamboyant Team, FPT University, Can Tho</p>
4D	<p><b>Title:</b> A study on factors distracting FUHCM students in ESL distance learning during the Covid-19 pandemic in Spring 2020</p> <p><b>Student(s):</b> Tran Hoang Thuy Trinh, Le Hoang Minh Thu, Ho Thi Thu Hien – TH True Team, FPT University, Ho Chi Minh</p>
5D	<p><b>Title:</b> Social Presence of the Community of Inquiry through Students’ Online Learning Experiences</p> <p><b>Student(s):</b> Dang Dai Man, Huynh Quoc Cuong - Super Duper Lazy Team, FPT University, Can Tho</p>

## CONFERENCE VENUE



### FPT UNIVERSITY HO CHI MINH CITY CAMPUS

D1 Street, Saigon High-tech Park, Long Thanh My Ward, District 9, Ho Chi Minh City, Vietnam

<https://hcmuni.fpt.edu.vn/>

**Inspired by natural landscapes of Southern Vietnam, FPT University campus, surrounded by greenery and trees, appears like a mountain range in Eastern area of Ho Chi Minh city.**

- Located at Saigon High-tech park – known as regional Silicon Valley, FPT University is the neighbor of many leading companies in technology such as Intel, Samsung, Nidec, FPT Software and scientific and technical research centers.
- FPT University Ho Chi Minh city campus covers a net area of 22,540 m<sup>2</sup>, accommodating up to 15,000 students.
- Providing: 200 classrooms (all equipped with intelligent automatic electrical system, maximum 30 students each); 3 large seminar rooms with the capacity of 650 people.
- Get inspiration from Hanging Garden of Babylon, FPT University provides green space of 1300 trees growing out of all the void in the building from balconies, rooftops, walkways, creating a fresh green scenery right outside the classrooms' windows.
- Besides study spaces like classrooms, creativity room, studio, English area – Little UK, FPT University also provides students areas for entertainment activities, equipped with giant chess set, table football, ping pong, rainbow staircase, football court, canteen and outdoor cafeteria...
- The famous Paris La Defense square is the inspiration for our unique campus's yard, which is covered by colorful bricks, creating a fancy top view of FPT University campus.

## KEYNOTE SPEAKERS

### **Ph.D. VO TAT THANG**

Head of Department of Planning-Investment-Development, School of Economics,  
University of Economics Ho Chi Minh City

Director of Health and Agricultural Policy Research Institute



Ph.D. Vo Tat Thang is an expert in the field of health economics (Ageing, Nutrition, Health Insurance) and development economics (Poverty, Vulnerability, Inequality, Child Development, Women Development). He has experiences with large data sets, and his research focuses on the economic impacts of programs, events, shocks on the household's lives, health status, and local development. He has published in World Development, World Development Perspective, Social Indicators Research, Agricultural Water Management, and International Energy Journal.

## MR. PHI ANH TUAN

Chairman of P.A.T Consulting Ltd;

Vice-chairman of Ho Chi Minh City Computer Association (HCA)



With many years working in the international environment at multi-national corporations such as Digital Equipment Corporation – Computer Science Corporation, Mr. Phi Anh Tuan has accumulated remarkable experience in the IT field, especially in the field of management information system (ERP, SCM, CRM, etc.). He has participated in the successful implementation of various projects in large enterprises in Vietnam with diversifying fields including electronics, manufacturing, aviation, pharmacy, logistics, commercial services, etc. With hindsight, Mr. Tuan can be considered as one of the pioneers and leaders in applying IT solutions to the actualities in companies and organizations.

In addition to experience as a manager in the position of CEO of many companies and corporations in IT field, Mr. Phi Anh Tuan is also well-known for his vocational and inspirational impact on anyone who pursues this “tough” career path through such roles as:

- Co-founder of CIO Vietnam and IT leader Community;
- Vice-chairman of Ho Chi Minh City Computer Association (HCA);
- Lecturer in MIS (Management of Information System) in CMU Program at Van Lang University;
- Lecturer in MIS in Master program of management accounting at University of Economics in Ho Chi Minh City (UEH).

## 1A

### **A Decision Support Tool for Multi-Objectives Resource-Constrained Project Task Schedule Problem in Software Development Project**

**Hoang Duc Binh, Nguyen Ba Son, Nguyen Hoang Son, Vu Tri Hien, Kieu Quoc Tuan**

*FPT University, Hanoi*

#### **Abstract**

Assigning tasks in the project to each member is a difficult job in project management. In this study, we build a multi-objective combinatorial optimization model to assign project tasks of the software project to its members automatically. The model aims to minimize the critical path and a strategy to employ human resources to optimize the project cost determined while maintaining the labor force's quality. The necessary constraints of the makespan problem strictly followed. An alternative of the Compromise Programming approach applied to transform the multi-objective optimization problem to a single objective. Due to the proposed model is NP-Hard and not possible to solve with an Exact Algorithm, we design a scheme of the Genetic Algorithms to solve the proposed combinatorial optimization problem. Experimental results show that the algorithm worked well on the real dataset.



## 2A

### **AI in building chicken disease management systems**

**Pham Quoc Nghi, Le Thanh Nhan, Truong Thi Thanh Xuan, Huynh Thi Nhien**

*FPT University, Can Tho*

#### **Abstract**

Food stability has always received worldwide attention, especially in the development of the poultry industry. However, the poultry's diseases have caused the loss of poultry population and direct income of the owners. In this work, a system comprising of a website and a mobile application has been developed to support disease identification in chickens; the disease spread locations can be managed and traced with maps. In addition, the system allows farmers to make contact and get support from experts through chat, voice call, and video call. It also has some e-commerce functions for improving sales of poultry's owners. This research focused on identifying diseases in chickens through images by using SURF characteristics to identify disease spots on the chicken body, K-means clustering algorithm to detect disease areas in the chicken body and to use neural network model called ResNet-50. The developed model achieves an accuracy of 93.56%.

## 3A

### Automatic Hand Sanitizer

**Nguyen Thai Binh, Tran Duc Hau, Pham Thanh Toan, Son Le Quoc Hung**

*BTEC FPT College, Ho Chi Minh*

#### Abstract

Despite significant science and medical advancements, the potential for spreading diseases is actually rising today, and so is the possibility of outbreaks turning into epidemics or pandemics. It is human activity that allowed the virus to move from the surfaces people have reached in everyday life to people. So, it has never been more important to practice hand hygiene. Nevertheless, we are also worried about common hand sanitizer that many individuals often touch bottles in public areas themselves, making them a possible means of transmitting infections. Here, we applied IOT features to make a supply model consists of a bottle containing the sanitizing solution, a sensor to detect users, and a microchip to control the system. Interestingly, after several days of testing, we have successfully created a model that automatically releases sanitizing solution when people put their hands under it, provides them get hand sanitizer from anywhere without touching bottle entirely, along with the voice feedback feature to remind people wash their hand. Our model addressed that people get their hand hygiene by using automatic hand sanitizer is play vital role to reduce the chances of infection. The model strengths are compact, portable and isn't costly to make that suitable for households and office at smale scale.



## 4A

### Apply artificial intelligence to control and use the smart home system

**Le Thanh Tung, Nguyen Viet Hoang, Nguyen Tran The Anh**

*FPT School, Da Nang*

#### Abstract

The team has created the smart home system to increase accuracy, improve security and increase user experience. The product was developed in 2019 and was finalized as ResFes with features such as web home control, scripting automation, home control via voice, link to google assistant, alarm. with motion sensor, smart electric saving system, electricity price calculation, ... And this year the group brought AI into the system with 3 new features such as controlling the house with facial emotion (Deep Learning) can recognize Happy, Sad, Angry expressions, sleep detection. Instant warning by image processing OpenCV, Deep Learning (extremely accurate) by detecting the shape of people and vehicles leaving the safe area and alarming speakers and chatbots. Chatbot Facebook Messenger increases the experience and convenience for those who are not tech-savvy. With buttons in the chatbot are designed simply but have many features such as opening favorite music through google home speakers, ghost story store Turn on and off lights, text to speech, configure security systems, and smart push

notifications are now available via Facebook Messenger. In addition, with the link to the open source Home Assistant platform, the product can be linked to many types of devices such as TVs, smart speakers, air conditioners, robot vacuums, smart switches, Smart sensors (Many brands are supported such as Samsung, LG, Sony, Xiaomi, ...). The chatbot and security features with Deep Learning are currently being tested on the camera (Ezviz C6CN) has proven stable and safe, the face control feature is currently being tested to improved accuracy.

**Keywords:** Smart home, Messenger Chatbot, AI, Deep Learning, Home Assistant.



## 5A

### A Decision Support Tool for Multi-Objectives Teaching Assignment Problem

**Phan Lac Duong, Doan Van Thang**

*FPT University, Hanoi*

#### Abstract

The problem of scheduling is an area that has attracted a lot of attention from researchers for many years. Its goal is to optimize resources in the system. The assigning task to the lecturer is an example of the timetabling problem, a class of scheduling. In this study, we introduce a mathematical model to assign fixed tasks (the time and required skills to be fixed) to university lecturers. Our model is capable of generating a calendar that maximizes faculty expectations. The formulated problem is in the form of a multi-objective problem that optimal makes decisions require the trade-off presence of trade-offs between two or more conflicting objectives. To solve this, we use Compromise Programming approach to multi-objective programming. We then proposed the new version of the Genetic Algorithm to solve the introduced model. Finally, the model and algorithm tested with real scheduling data collected at the Computing Fundamental Department, FPT University, Hanoi, Vietnam.

**Keywords:** Smart home, Messenger Chatbot, AI, Deep Learning, Home Assistant.



## 6A

### Detection of invertebrate virus carriers to prevent emerging pandemic-prone disease in tropical countries

**Daeniel Song Tze Hai**

*UOW Malaysia, KDU Penang University College, Malaysia*

#### Abstract

Insects are a class of invertebrate organisms. They are a massively effective group, comprising animals such as bees, butterflies, cockroaches, flies, mosquitoes, and ants. Mosquito-borne



diseases are those spread by the bite of an infected mosquito. Zika, West Nile virus, Chikungunya virus, dengue, and malaria are diseases that are spread to people by mosquitoes. The purpose of this work is to show that computer vision can classify the mosquito species that spread the dengue (emerging-pandemic prone disease) by using Convolutional Neural Network (CNN). The work is to assist the non-specialist to identify these three types of mosquito species with a simple web interface integrated with deep learning models works at the back-end. Convolutional Neural Network (CNN) has been implemented to extract features from the mosquito images and identify the mosquito species, such as Aedes, Anopheles, and Culex. There are 2,111 mosquito images collected and used these mosquito images to train the CNN to perform mosquito species classification. From the experiment result, deep learning shows that it has the ability to identify the mosquito species. There are series of experiment has been conducted with data augmentation, regularization technique, stride, filters methods in convolutional layer to improve the performance of the algorithms with higher prediction results.

**Keywords:** Dengue, Deep learning, Convolutional neural network, data augmentation, Mosquito.



## 7A

### Suggesting the suitable learning path through tracking students' reading and comprehension process in Community Learning Forum (CLPF)

**Huynh Kim Tri, Nguyen Tan Luat, Nguyen Trieu Duy, Vu Thien Hai**

*FPT University, Ho Chi Minh*

#### **Abstract**

This section presents the solution of suggesting a series of articles and learning path that are suitable to students' abilities at a time through following and analyzing the reading and understanding process of each individual. Suggestions for articles are already commonplace on popular forums and training websites. Simultaneously, based on the history of readings, the system offers similar articles related to the topic for users to choose, or the articles are already arranged in order according to the author's sense. However, rather than depending on the reader's deliberate judgment in the first place about what they should read and learn – in case they are unsure whether the choice is right or. It is necessary to select articles that selectively along with that is arranged in a reasonable order based on the capacity and interest of the reader. This helps readers visualize their reading process and test their abilities. This approach also gives readers peace of mind when they no longer have to think about what to read so that the system suggests it does not go beyond understanding.

**Keywords:** Suggest learning path, tracking students' reading and comprehension process.



## 8A

### AI Based System For Cheating Prevention In Online Examination Under Covid-19 Pandemic

**Tran Phuong Dong, Tran Van Chuong, Ho Ngoc Vinh Han  
Vo Van Hieu, Huynh Thi Nhat Uyen**

*FPT University, Da Nang*

#### **Abstract**

Considering the current state of the world pandemic situation due to COVID-19, there is a strong requirement to change the way of conducting the examination. The way of traditional examination is unable to meet the needs of the current situation in the world. The main objective of this paper is to propose a Novel Artificial Intelligent oriented examination system to meet the needs of developing education informationization. The system proposed ensures the way of examination handling by the student via behavior motivated by Artificial Intelligence. The core of the system proposed has two Modules: Client and Supervisor. To conduct the examination, candidates are provided with their respective room code containing questions. The supervisor being the central administrator monitors and provide assistance to the candidates. The system proposed not only conducts examination in smooth manner but also ensures a strong remote education model to conduct online classes. The testing of the system in the University campus ensures that the system is flexible and be scaled in the near future to enroll students in varied courses, irrespective of the location.



## 9A

### Blockchain-based Traceability in Medical Products Supply Chain Management

**Nguyen Vuong Khang Hy, Dao Anh Tuan, Pham Van Trong Nhan  
Nguyen Huynh Tuan Khoi, Nguyen Cao Phong**

*FPT University, Can Tho*

#### **Abstract**

The COVID-19 is putting tremendous pressure on the medical facilities supply, as the demand for facilities has significantly outweighed the production capability. A number of rogue traders have taken advantage of this issue to distribute counterfeit products. Moreover, some sellers advertise genuine products with unreasonably high prices. We believe that fake or overpriced facilities will greatly complicate the battle against COVID, thereby pose millions of lives to risk. That is why our team is developing V-Block. V-Block is a supply chain management system that harnesses the power of Blockchain. Its primary goals are to assist the government in tracking the product's distribution process and help customers avoid questionable deals.

# 10A

## The Covid-19 supporting, tracking, analyzing website

Trinh Quang Hien, Doan Duc Tin, Nguyen Xuan Huy, Nguyen Quoc Hung

*FPT University, Da Nang*

### Abstract

The worldwide COVID-19 pandemic is the situation in which people are suffered not only the global health crisis as depression and death, but also the slowing down of global economy as losing jobs and income. Indeed, this pandemic has a negative impact on the living standard of thousands of people and put our society in a threat stage that is hard to recover. In this study, we present the useful HTH Covid-19 Tracker website for tracking the Covid-19 information, finding the urgent place where the charity sponsor can provide food, finance and medical equipment immediately, viewing the threat zone affected by Covid-19 per regions, time and importantly, searching the safe place to go. The HTH Covid-19 Tracker is operated based on data of 386 Covid-19 patients living in Da Nang City, which is published and updated by Da Nang Department of Health. The main language used is Java with deployment platform run by Azure, MSSQL and Linux Virtual Machine. The backbone advanced frameworks are Spring MVC, Hibernate, Google API, the statistical computing and graphics R language, and Business Intelligent and embed ELF. We expect that the HTH Covid-19 Tracker will have a great contribution to protect people from poverty, disease and bring safety to our livings.

**Keywords:** Covid-19 tracker, supporting, analyzing, tracking, R language, Business Intelligent, Spring MVC, Hibernate, Google API.



# 11A

## FU Covid-19 AI Agent built on Attention algorithm using a combination of Transformer, ALBERT model, and RASA framework

Nguyen Van Thai, Phung Duc Thang, Tran Duy Dat, Tran Thi Thuy Nguyen, Luu Viet Ha, Tran Duy Anh, Pham Tuan Anh, Bui Lam Loc, Nguyen Tan Viet

*FPT University, Hanoi*

### Abstract

Natural Language Processing (NLP) and Image Processing are areas that people focus on to exploit their advantages. Most researchers use artificial intelligence (AI), machine learning, and deep learning to solve the problem. They use RNN, CNN, LSTM, and Attention, the deep learning models, to overcome the difficulties. Language diacritic restoration and question/answering are the main issues for many languages globally, especially the language containing diacritic likewise French, Romanian, Vietnamese, etc... Vietnamese is one of the

problematic grammar languages, and there are not many kinds of research doing in the auto-correction language or diacritic restoration area.

Moreover, a chatbot can correct words and give the right answer for a question is a big challenge for natural language processing. This research aims to build an AI agent who provided information for people who want to find information and understand the Covid-19 pandemic for Vietnamese. We produce an AI agent based on the newest natural language processing algorithm, Attention. Attention is introduced in the Transformer model with the title "Attention is all you need" [1]. The input of the AI agent includes a Vietnamese sentence with or without tone and a paragraph containing information about the Covid-19 pandemic. The output of the AI agent is the answer to the question focusing on the content of the article.

**Keywords:** Artificial Intelligence, Machine Learning, Deep Learning, Natural Language Processing, Attention, Transformer, Bert, Albert, Rasa.

# BUSINESS ADMINISTRATION

## 1 B

### Exploiting Coronavirus to raise environmental awareness

**Thanh Pham, Huy Le, Phong Pham, Phong Nguyen**

*BTEC FPT College, Ho Chi Minh*

#### **Abstract**

The Covid-19 has brought about many associated problems, which are causing humanity to struggle in any aspects of lives. Not only that, Covid-19 also divert people attentions, eclipsing some already-serious issues of degrading environment. Therefore, this paper aims to determine problems that are caused by Covid-19 and then propose a solution to mitigate the impact of Covid-19, while also raise people's awareness of protecting the environment.



## 2B

### Using Self Check-In / Self Check-Out at hotels in Mekong Delta: Perception, reality and trend in the context of Covid-19 pandemic

**Luu Pham Thao Nguyen, Le Minh Anh, Nguyen Thi Anh Thu, Nguyen Ha Ai My**

*FPT University, Can Tho*

#### **Abstract**

Today, it is obvious that the development and application of technology in hotel self-service are rapidly increasing. The purpose of the paper is to assess that the perception, reality and trend of self-check-in / self-check-out services at hotels during the Covid-19 pandemic period will be a viable solution and help both save waiting times and protect customers safely. A simulation survey which was conducted at multiple hotel locations shows that customers are more likely to use kiosk machines for checking than apps and web through analyzing data using based on quantitative methods. Since then, the model of interpretive structure (ISM) and Impact matrix cross-reference multiplication (MICMAC) are based on the approach which has been used to model the efficiency variables that the "self-check in" activity generates. The results recommend that the kiosk should include thermometers in the design to detect high temperature early which help to take proactive measures to prevent if this pandemic is still long lasting and complicated.

**Keywords:** Kiosk, self-service technology, service level, waiting-time.

## 3B

### Sustainable Indexes for Assessing Unemployment problem using A Hybrid Multi-Criteria Decision-Making Model

Nguyen Hong Phuc, Vu Anh Duc, To Bach Viet, Le Van Nam, Nguyen Khanh Chi

*FPT University, Hanoi*

#### Abstract

The COVID 19 pandemic has led to a new global recession, which is still causing – because of the delays in the employment effects – dramatic consequences on the labour markets of many countries in the world. The complexity and importance of this problem require an integrated method of subjective and objective evaluation rather than intuitive decisions. This research aims to investigate sustainable indexes for assessing unemployment problem by using a Multi-Criteria Decision-Making Model (MCDM). Grey theory and Decision Making Trial and Evaluation Laboratory (GDEMATEL) are deployed to transform the experts' opinions into quantitative data. This technique not only helps to investigate the causal relationship between the proposed criteria but also to determine the weight of each criterion of unemployment problems. The analysis based on 20 main sustainability criteria are used for the determination of sustainability indicators. The results show that GDEMATEL could be exploited effectively to assess the sustainability indicators for unemployment problem in "deep and wide" aspects. The study contributes to the literature, provides future research directions, and helps policy makers and researchers to more easily achieve the best solution dealing with both qualitative and quantitative criteria.

**Keywords:** Pandemic, unemployment rate, labor markets, MCDM.



## 4B

### Citizens' Intention to use E-government and Recommendations for further developments under Covid-19 Pandemic: An empirical evidence of Danang City

Le Bao Tran, Huynh Thi Nhu Quy, Kieu Viet Anh Duy,  
Huynh Hoang Kim, Nguyen Minh Ngoc

*FPT Greenwich, Da Nang*

#### Abstract

This study was operated to investigate the determinants of the Citizens' Intention to use E-government based on different factors by using the quantitative method. Besides that, the recommendations for further developments under the Covid-19 Pandemic at Danang City is also suggested. The survey was conducted with more than 300 participants mostly

from Danang city. The research illustrates the influences of several explanatory variables namely Effort Expectancy, Performance Expectancy, Subjective Norm, Facilitating Conditions, and Covid-19 factors to the Intention to use E-government in Danang city. After analyzing the database, it can be concluded that the Covid-19 elements determined as Perceived Severity and Policy Barriers have significant impacts on changing the behavioural intention of adopting Danang's E-government services. Apart from the highlighted findings, the study has some drawbacks due to the limited observations, and the multiple linear regression model is not a best-fit analysis technique for a categorical dependent variable.



## 5B

### Learning Behavior Changes Of Students' Fpt Polytechnic During The Covid-19 Pandemic

**Ha Quang Vu, Do Ngoc Bich, Nguyen Long Đạt, Do Phuong Thao**

*FPT Polytechnic, Hanoi*

#### **Abstract**

The outbreak of Covid-19 has changed lots of things in students' life and also in their studies, including FPT Polytechnic (FPOLY) students. The study was conducted with the probability sample of 220 FPOLY students at the Hanoi campus. The purpose of this study is to describe the changes in students' learning behavior from the normal context to the pandemic one, test the correlation between motivation and learning behavior with the learning achievement of FPOLY students, and also propose some solutions aimed to minimize the impact of the coronavirus disease on learning, as well as improve the learning quality of students in this pandemic. The results show that students' learning behavior have changed in class participation, teamwork, practice, and self-study. These learning behavior changes lead to the positive effects on students learning achievement.

**Keywords:** Learning behavior, students, Covid-19, FPOLY.

## 6B

### The Research And Solutions Help To Enhance Learning Online Quality In The Context Outbreak Of Covid19 Global Pandemic

**Tran Ngoc Phu, Le Tran Gia Bao, Ho Thi Thanh Ngan**

*FPT University, Can Tho*

#### Abstract

Researching online learning behaviors is essential for the development of online education. This study increases the suitability and flexibility of study online at the moment ' Hot'- current COVID epidemic. With the desire to understand the behaviors and factors affecting online learning behavior of Vietnamese students, Research proposal for " The solution for promoting learning online in the context booming of COVID19 global pandemic" to identify and describe the characteristics of students during the studying online process, as well as identify and analyze the important factors affecting the conduct online learning of students. This article finds out solutions promote learning in the online learning process, as well as bring practical value to education in the strategy of building compatible systems and policies. The method of quantitative research is Conducted on the students on the basis of the framework of Ozkan and Koseler (2009) and Mayerova and Rosicka, (2015). Data analysis methods were used: descriptive statistics, exploratory factor analysis, confirmatory factor analysis and structural equation analysis.

**Keywords:** Online Learning, Covid19, Learning Behaviors, Solution.



## 7B

### COVID-19 pandemic: The behavioral psychology behind panic buying and its socio-economic impacts in Vietnam

**Bui Nguyen Quang Huy, Dinh Nguyen Hoang Tam, Le Nguyen Huu Quoc, Hoang Van Hoan, Nguyen Minh Tuan, Hoang Phuoc Thanh, Pham Thi Thanh Thanh, Ha My Linh, Nguyen Thi Quynh Nhu**

*FPT University, Ho Chi Minh*

#### Abstract

Panic buying is a common phenomenon in many countries due to the recent COVID-19 pandemic. Despite the importance of the problem, the current understanding of panic buying is quite limited, particularly in Vietnam. The purpose of this paper is to identify, examine and explore scientific insights into each psychological cause of panic buying, which is a relatively new and undiscovered area in consumer behavior research. Moreover, there are not many studies that have analyzed the influence of consumer behavior within the socio-economic

context. This paper also aims to perform an in-depth analysis of how human behavioral psychology affects socio-economy. The results provide implications of suggestion to produce an influential video. It is an efficient way of affecting people's behavioral psychology, conveying a powerful message to help eradicate the root of panic buying.

**Keywords:** Panic buying, COVID-19, behavioral psychology, consumer behavior, socio-economic impacts, influential video.



## 8B

### The pandemic and the global economy: Exploring issues and solutions

**Tran Thi Minh Chau, Le Thi Thu Hien, Duong Thi Ngoc Mai,  
Le Thi Hien, Nguyen Tien Son, Vo Nhu Hoa**

*FPT University, Da Nang*

#### Abstract

The pandemic has caused not only health issues and deaths but also numerous severe devastations to the global economy. In terms of the extreme impact of the epidemic on the global economy, it is crucial to investigate the pandemic and their pessimistically hidden influences to prepare appropriate strategies. However, although this topic gains enormous attention from scholars and researchers, there is still a lack of a comprehensive literature review on the issue, along with a little in-depth literature on individual aspects of the world economy. The purpose of this paper is to provide a literature review that synthesizes and evaluates prior research, to examine the current state of the pandemic impacts on the global economy, as well as become the essential foundation for the practitioners to perceive how to respond to a pandemic in the future. A systematic literature review is conducted, with 230 most relevant articles are analyzed and classified based on the proposed framework. Accordingly, the findings of this study contribute theoretical and practical insights concerning pandemic and the global economy. The results of this paper indicate the current status of the literature review and discover future research directions. Besides, this paper proposes an integrated framework of the most influenced industry, along with some emerging effective solutions to the most suffering sectors. Future research directions are also suggested based on the identified research gaps and the analysis results.

**Keywords:** Pandemic, COVID-19, global economy, literature review.



## Healthy Lifestyle of Vietnamese Undergraduate Students in COVID-19 and Implications for Marketing

Pham Hoang Thu Uyen

*FPT University, Hanoi*

### Abstract

The meteoric speed that Covid-19 spread all over the world has surpassed most if not all expectations and predictions. Nations closed their borders, economies are going into recession and the whole world is suffering from the rise of death tolls. Even though the monetary impacts of the pandemic can be estimated and assessed, changes in people's lifestyle aren't easy to anticipate. This paper aims to gain a better understanding of the healthy lifestyle with a focus on undergraduate students by examining demographics, personal values and psychographic antecedents and its implications for marketing. All the questions (item pool of healthy lifestyle) were gathered, to describe the healthy lifestyle of Vietnamese undergraduate students in the current period, and then survey them in large numbers. Items were translated from English to Vietnamese and back-translated to English to be confirmed. Exploratory Factor Analysis was used to identify factors - these factors are lifestyle patterns. A cluster analysis was used to divide consumers into lifestyle segments based on their habits, attitudes and activities. The sampling method used in this paper is convenience sampling, with a sample size of 400 Vietnamese students. This paper predicts that Covid-19 will likely affect Vietnamese students' lifestyle, such as routines, attitudes, activities. New forms of lifestyle also drive consumer behaviour. Describing lifestyle patterns could help marketers identify new segments for their marketing strategy/tactic. Such changes are likely to force businesses to reconsider their marketing strategy. A significant criticism about using a convenience sample is the limitation in randomness and generalization. Another limitation is that there is currently no healthy lifestyle scale for Vietnamese people, so developing it will be risky. The financial impact of the healthy lifestyle consumer on a number of industries is documented. Especially when Covid-19 dramatically affects the lifestyle changes of Vietnamese students, a demographic profile of the healthy lifestyle consumer was obtained which should assist companies seeking to target this segment. The results of this study can contribute to the effort to classify lifestyle patterns while also having marketing implications for administrators. This paper represents one of the first attempts in the marketing literature to study the healthy lifestyle segment during Covid-19.

**Keywords:** Covid-19, Healthy Lifestyle, Marketing, cluster analysis, lifestyle patterns.

# 10B

## Factors influencing learner's participation in E-learning

**Doan Kim Loan, Dao Quang Thu, Tran Nguyen Thuan, Vu Tung Linh**

*FPT University, Ho Chi Minh*

### **Abstract**

In this digital era, e-learning plays a vital role in educational programs, since a substantial growth of high technology has made a pathway for the ease of it (McBrien et al., 2009). Distance learning can help students resolve the potential problems of traditional classes, by providing an opportunity to learn almost everywhere and virtually interact with tutors as well as their peers (Singh and Thurman, 2019). Nevertheless, until the Covid-19 pandemic outbreak in Vietnam in 2020, it has been significantly taken into consideration by institutions to continue their curriculums. Carey (2020) emphasized how academic organizations have made an effort to apply massive e-learning into their programs as a prior concern. To some extent, this quick change to adapt to the situation also brought drawbacks which can decline students' perceived efficiency of distance learning. Therefore, this research paper will first review the proposed theories regarding five factors influencing students' participation in e-learning, which include Learner's Attitude, Instructor's Attitude, Course Design, and Interaction through analyze primary data and then give findings and recommendations to help students effectively receive benefits from e-learning. The scope of research is applied for the first-year students from FPT University Campus Ho Chi Minh.

**Keywords:** E-learning, online, Learner's Attitude, Instructor's Attitude, Course Design, Technology Levels, Interactions, FPT University Ho Chi Minh City (FPTU).

# GRAPHIC DESIGN

## 1C

Communicate information of worldwide pandemic by graphics for children.

Le Nguyen Xuan Dieu Phuc, Vu Minh Quan, Le Nguyen Hai Thuong,  
Vo Nguyen Mai Thy, Truong Nhat Tuan

*BTEC FPT College, Ho Chi Minh*

### **Abstract**

When worldwide pandemic happened, people must do medical measures to keep safe for everyone and some companies let employees work from home, children must join an online class. Parents go to work every day but when the pandemic happens, they stay home to work and take care of their children. Besides the stress of working, parents also have stressful when their children always ask questions about the pandemic. The children have a little knowledge about the pandemic so, with our products, children will have more knowledge and learn how to protect not only themselves but also everyone. But instead of a basic guideline which is not interesting and hard for children to pay attention, our team decide to make a series called "Justin's diary" which transfers the information with the easiest way for children. "Justin's diary" is about Justin's vision about worldwide pandemic. Justin, a 3 years old boy, he has a creative mind, whatever he does, in real life it just a normal action but in his mind, it likes he is a soldier and fight with the virus named Divoc. The name Justin is from "justice" and the name Divoc which from "Covid" – a name of a virus from Wuhan which has become a disaster from the late 2019 until now.

**Tools:** Adobe Photoshop, Adobe InDesign, Procreate

**Keywords:** Children, Pandemic, Comic, Color, Worldwide, Science Fiction, Educate, Heroes, Entertainment, Family.

## 2C

### Smartphone Application for People with Mild Depression to Activate Their Physical Lives During Pandemic Pressure

**Tran Vu Thao My, Bach Le Diem Quynh, Nguyen Hoang Nhi,  
Le Dao Lan Truc, Le Tuyet Nhi**

*Van Lang University, Ho Chi Minh*

#### **Abstract**

Depression is the reason why many people suffer from the loss of controlling their emotions or even suicide and the Corona virus disease (COVID – 19) pandemic has been recorded to have an extreme increase in the number of depressed people due to the huge affection when people have to stay at home. However, appropriate prevention at the early stage helps a lot before any serious symptom takes over and using an interactive application encouraging people to physically interact with what they do and stay away from their smart phones while staying at home is the most potential solution. The study aims to create a friendly and balance environment for people with mild depression to rebuild their daily activities and lead healthier lives. The data for the application to be built are based on previous studies from other authors. A virtual character is also built up and grow everyday due to the growth of the users to make them feel the friendliness and stay connected more with the process. Users' progresses are recorded by themselves as proofs to the application system in order to get rewards. The application is not a treatment to whom with depression but a tool to help free themselves and avoid negative thoughts and habits, especially pressure during the pandemic.



## 3C

### An application that can support users in understanding skin knowledge, finding suitable skincare products, and maintaining a healthy lifestyle for the skin

**Luu Xuan Hieu, Ngo Thi Lan Anh**

*FPT University, Hanoi*

#### **Abstract**

With the topic of application to support skincare knowledge, we named this project LYS, it is abbreviated by the phrase "Love Your Skin". And this is also seen as the message that we want to convey to our users. That is to always cherish and love your skin by understanding and caring for the skin properly. As appearance becomes more important, users spend more on beauty products and skincare services (spas, dermatology clinics, etc.). According to Mintel, a market research company based in London, the Vietnamese cosmetics market is worth 2.3

billion USD by the end of 2018. This is a market full of potential, as the Vietnamese middle class by 2020, it is estimated at 33 million people. Besides, the expanding market means more and more skincare products, so it's hard for users to know what they need or want. Although much of the current knowledge is popular in skincare, regarding its ingredients and effectiveness, it can still be confusing, and take a lot of time to find a suitable product for each individual. We used desk research and non-experimental methods by observing, interviewing, and surveying questionnaires to learn more about our topic. Since, we have decided to create an application that can support users in understanding skin knowledge by skin type test, skin analysis report; finding suitable skincare products; maintaining a healthy lifestyle for the skin by the reminder, skincare planning, the diary for the skin.



## 4C

### Contribution to vaccine research and manufacturing fund

**Nguyen Thi Thanh Thao, Thai Tran Thanh Tu**

*FPT Polytechnic, Da Nang*

#### **Abstract**

Earth has been around for hundreds of millions of years since its formation and development. During this time, there have been many disasters, large and small, such as the dinosaur extinction, ice age, natural disasters, earthquakes, tsunamis, especially dangerous diseases. So why humans still exist until now. Not because it is a miracle or an immortal man, but thanks to extraordinary thinking and brains that help people find a way to overcome and solve the problem. If a catastrophe happens, which threatens to destroy humanity, what will we do? This is no longer the hypothesis that it actually happened. Continued pandemics and natural disasters have claimed the lives of millions. Between 165 and 180, the Antonine pandemic took the lives of 5,000 Romans in just one day. In 1331-1335, the Black Death pandemic (plague) caused 75 million deaths worldwide. In 1361-1480, the plague reappeared in England every two to five years. By the 1370s, Britain's population had decreased by 50%. When the plague raged in London between 1665 and 1666, the pandemic killed about 100,000 people or 10% of the city's population. The Spanish flu that happened between 1918 and 1920 has infected 500 million people worldwide. And now, the world is facing an extremely dangerous pandemic -COVID 19. Up to now, there have been more than 31 million cases, more than 972 thousand deaths, and the number has not stopped. and is still increasing. These pandemics not only endanger human life but also have a strong impact on the economy and development of all countries. At the same time, they also dealt a heavy blow to the world health industry. These numbers show us how frightening and frightening a pandemic a pandemic is. The only way to prevent a pandemic is to produce vaccines, but it takes a lot of money to make it, over 2 to 3 years. Shorten the time to prepare vaccines, quickly reverse the pandemic. Humans cannot sit still for the pandemic to continue spreading. Each individual must work together to fight a pandemic. For us graphic design students, it may not be possible to make vaccines but indirectly help us in our way. As graphic students, we will create posters that help people donate their

money to vaccine research and development. Helping scientists, doctors and pharmacists shorten the time of research and testing, to quickly heal people. Posters with typography style. Use keywords related to pandemic such as Protection, donations, vaccines, medicines, solidarity, join hands to show solidarity and mutual assistance against the pandemic. Besides, we also use words to describe the terrible devastation of the pandemic such as death, economic crisis, no deployment, and quarantine. Use Photoshop tools and text arrangement method to create 2 posters.



## 5C

### Animated Poster: Actions In Worldwide Pandemic

**Duong Thi Van Huong, Vo Tran Hieu Bang, Nguyen Le Anh Huy, Tran Hoang Phong, Nguyen Quoc Loc, Pham Thien Thai An**

*FPT University, Can Tho*

#### **Abstract**

Actions In Worldwide Pandemic is a set of 13 media pictures including 1 main picture and 12 small pictures with content adapting and facing pandemic. The set of paintings combines traditional Dong Ho folk art with motion lighting methods, interactive 2D motion processing techniques, and QR code scanning to display animations of paintings. Through a set of media pictures that remind people of the severity of a pandemic, and provide people with solutions to adapt and deal with pandemic problems.

**Keywords:** Adapt, facing, pandemic, Dong Ho folk, animations.



## 6C

### Research about children's activities during quarantine time

**Dao Le Nhat Tan, Ho Thi Thanh Thao, Le Nguyet Song Thu, Tran Thien Phuc, Nguyen Dang Dung, Do Ngoc Khanh Uyen, Huynh Thien Nhan, Nguyen Phuc Thien An**

*FPT University, Ho Chi Minh*

#### **Abstract**

Research about children's activities during quarantine time provides an insight into what children usually did for entertainment in the previous lock-down period, what were their interest and whether they had much awareness about the pandemic. The result of the research then

inspired us to create "The Little Heroes" illustration book. The story is a fantasy one that follows the journey of three young heroes - Uyen, Hieu and Dung in the fight against the COVID Monsters that are attacking Hồ Chí Minh City. The book will not only create a new outlook, one that is much more exciting, less scary and full of adventures, about the disease, but also give them useful information about how to prevent COVID-19 and praise doctors, the police force, the delivery people and so many more who have contributed greatly to our society.



## 7C

### Research and solutions to helping protect families during a pandemic

**Hoang Trong Tung, Nguyen Dinh Phuc**

*FPT Polytechnic, Da Nang*

#### **Abstract**

Based on family love and research on food issues during the epidemic season. This study aims to address the problem of food shortages in the context of prolonged epidemic periods. With the desire to create safe epidemic zones and have enough food, we propose " Research and solutions to helping protect families during a pandemic" research to propagate and support people on how to build safe zones and small gardens. .The data analysis methods: descriptive statistics, human needs analysis, real agricultural research.

**Keywords:** Pandemic, Worldwide Pandemic, Little garden, Family, Solution.



## 8C

### Applying street art graffiti in Corona virus preventive propaganda

**Nguyen Thi Tuong My, Pham Nguyen Anh Duy, Chau Dai Thanh, Nguyen Nguyen Kim Ngan, Ho Hoang Chi Bao**

*BTEC FPT College, Ho Chi Minh*

#### **Abstract**

Our product is a set of corona virus propaganda street art through the characters we combine, create and develop.

Then we choose some main factors: HERO, CULTURE, AREA PAINTING and the main character is MEDICAL MATERIAL. But in the end we chose characters in PlantVsZombie game as the inspiration for our design. The plants in the game are protecting the host from zombies. We find a similarity with what these medical materials mean that the soldiers protect us from the corona virus.

We have combine the favorites category of young people in vietnam is the hero in PLANT-vsZOMBIE with some essential item:

- Like the hand wash spray we turn that normal image into a herro that can attack the corona viruses like Gatling Pea.
- And this mask we turn him to a man with a shield who will protect mankind form COV19 attacked like a Wall Nut.
- Like the soap we turn that normal image into a herro that can attack the corona viruses like Squash. (There are some characters that we continue to design it.)

Area for Painting: we aim for cafes that young people often visit, our products will be painted on the walls of the cafes, they are both aesthetically pleasing and can raise awareness for young people about the prevention of corona virus.

**Tools:** Adobe Photoshop, Adobe InDesign, Adobe Illustrator.

**Keywords:** YoungPeople, Pandemic, Graffiti, StreetArt, Color, Worldwide/, Heroes, Entertainment, CoffeeChill.



## Using Comic For Health Education Before And After The Covid-19 Pandemic

**Lam Tran Minh Anh, Nguyen Nguyet Tu**

*FPT University, Can Tho*

### **Abstract**

Our project is a comic series named "Mr. Hac", including four main characters: Mr. Hac, a crane and a doctor, who is help us explain and advice about health knowledge related to Covid-19; Mrs. Suu, a beautiful buffalo; Sua, a dynamic dog who is studying at a secondary school; and Baby Duck, an elementary schoolboy. We create short stories in drabble format that revolve in these characters and add knowledge of Covid-19. Through conveyed stories and pictures, readers will better understand and remember medical messages.

**Keywords:** Comic.



### Factors influencing second language acquisition of university student

**Doan Kim Loan, Tran Dinh Thanh**

*FPT University, Ho Chi Minh*

#### **Abstract**

The objectives of this study are to identify the components influencing Second Language Acquisition, determine whether there is any difference in terms of gender or income. Motivation, language aptitude, learning strategies, learning styles, and anxiety are considered components that significantly impact somebody during the time spent their second language securing and are included in the proposed model. Specialists express that those elements give an increasingly predominant commitment in Second Language Acquisition to students variedly, rely upon who the students are, their age, how they act toward the language, their psychological capacity, and how they learn. Besides, concentrating a second language is a pattern now, which can assist individuals with having more chances to study and work globally. The research method is quantitative research (survey - using questionnaire). The sample size of the survey is 300, with respondents studying at FPT University Ho Chi Minh City. The key findings of this paper include that only four factors are influencing Second Language Acquisition, which are Motivation, Language Aptitude, Learning Styles, and Anxiety. In addition, while other factors affect positively, Anxiety has a negative effect on Second Language Acquisition. Finally, some managerial implications for FPT University Ho Chi Minh City are suggested in Chapter 5 of the paper.

**Keywords:** Second Language, Foreign language, Second Language Acquisition (SLA), Motivation, Language Aptitude, Learning Styles, Anxiety, FPT University Ho Chi Minh City (FPTU).

## 2D

### The Significance of Language in Encountering Pandemic Ravaging the World

Quach Khanh Nhan, Le Nguyen Khanh Huyen

*Nguyen Tat Thanh University, Ho Chi Minh*

#### Abstract

Many published studies have shown that the power of language in preventing pandemics from spreading in the world. This research focused on a survey which was designed to explore the significance of language which are used in media as well as newspapers in propagandizing against epidemics at Nguyen Tat Thanh University (NTTU). To fulfill this aim, small surveys and interviews are carried out in students studying at Faculty of Foreign Languages, NTTU with a view of knowing if language has played key roles in encountering pandemics ravaging the world. The findings of the research revealed that language used in media and the press is very important for stopping fake news, chaos in society and insecure psychology of people while pandemics raging every corner of the world. Based on the above-mentioned results, some recommendations were given to lecturers and students who are teaching and studying at universities to use language effectively in case pandemics appear.

**Keywords:** Significance, pandemics, fake news, media.



## 3D

### Order that seems to be disordered: Students' metacognition in online English classes at FPT University

Nguyen Thanh Dat, Phung Trieu Vy

*FPT University, Can Tho*

#### Abstract

During the first wave of COVID-19 pandemic, Vietnam recorded a rapid increasing number of cases day by day. Consequently, Vietnamese Prime Minister Nguyen Xuan Phuc issued Directive 15 and 16 starting nationwide social distancing since April 1. Education was one of sectors facing many challenges. It could be the first time in history of Vietnam's education when almost all schools from primary to university level had to take to the virtual environment. As university students, we believe that students have to be provided content knowledge and relevant skills. In this vein, as one of the important skillsets of the 21st century, metacognition must be embedded in university online lectures. Fundamentally, metacognition assists students with managing their learning processes to accomplish what they propose they require to accomplish. Students with

high awareness and knowledge of metacognition are said to become successful learners of related English subjects since they know how to mobilize their critical thinking skills to create a new self. In this study, we will report on our examination on the link between FPT University students' participation in online English classes during the first wave of COVID-19 and their metacognition-forming processes through reading activities. While previous studies, in general, depicted metacognition as a meta-level in which cognitive processes strictly followed the fixed order as indicated in Bloom's taxonomy – from low-order to higher-order, we argue that this order could be reversed in some ways.



## 4D

### A Study On Factors Distracting FUHCM Students In ESL Distance Learning During The Covid-19 Pandemic In Spring 2020

**Le Hoang Minh Thu, Ho Thi Thu Hien, Tran Hoang Thuy Trinh**

*FPT University, Ho Chi Minh*

#### **Abstract**

This study was created in order to investigate the factors distracting FPT University students during the English as the second language (ESL) distance learning in the Spring 2020 semester at Ho Chi Minh campus. Moreover, the study also collected suggestions of the solutions from the students who were interviewed. Understanding about those factors can help students and teachers find out the right methods of studying and teaching in ESL distance learning. This research focused on students majoring in English Linguistics, Business English and students taking General English courses. The study initially contributed a framework of factors of distraction depending on a database collected from students' answers during interviews. This framework was then conducted into an online survey on Google Form which was sent to 120 students of FUHCM to analyse the ratio of distractions of those factors as well as the possibility of the solutions. After having interviewed and collected information from students, the factors of distraction were grouped into four main categories including technical problems, problems from teachers, surrounding factors and subjective factors.

**Keywords:** ESL distance learning, Spring 2020 semester, Factors of distraction, Possibility of the solutions.

# 5D

## Social Presence of the Community of Inquiry through Students' Online Learning Experiences

**Dang Dai Man, Huynh Quoc Cuong**

*FPT University, Can Tho*

### Abstract

Changes caused by the COVID-19 pandemic have tremendously impacted different aspects in education which have shifted the traditional face-to-face approaches to online learning. The same holds true for FPT University. Albeit not being an innovative mode of learning, online teaching and learning have created a new cultural ambiance where teachers need to fix and fit their teaching methods and students need to have interactions with one another in their English classes as not being passive agents that only receive knowledge from their teachers. The present study draws upon the Community of Inquiry (Col) framework combining teaching, social and cognitive presences to explore English-majored students' online learning experiences from perspectives of social constructivist theory in English language courses. The objectives of this study were to assess the interrelationship among presences of Col and the impact of social presence on student learning. Both quantitative by using Col survey (Arbaugh et al., 2008) and qualitative methods were used for data collection. The results of this study indicate that teaching, social and cognitive presences are correlated and social presence has a significant impact on students' learning process. Furthermore, additional presences have wider implications to construct meaning in social learning context.

**Keywords:** Online Learning, Social Presence, Community of Inquiry, Social Constructivism.

# Note

A series of horizontal dotted lines for writing notes.





