

# ABSTRACT

## RESEARCH FESTIVAL 2021

FROM RESEARCH TO INNOVATION

Greenwich Vietnam,  
Hanoi Campus

December 18<sup>th</sup>-19<sup>th</sup>, 2021



# INTRODUCTION

With more than 20 years of development, FPT Education's vision is iGSM (Industry Relevant – Global – Smart Education – Mega): To become an international Mega education system, meeting the social needs and based on the most advanced training technologies. Furthermore, FPT Education has many annual academic activities to encourage and promote research and innovation for not only lecturers but also students. Research Festival (RESFES 2021) is a contest aiming to share and exchange knowledge and experience about Information Technology, Business Administration, Graphic Design, Linguistics, and Multimedia Communications among students of FPT Education and other local and international universities.

The theme of the RESFES 2021 is: **"From Research to Innovation"**. Each team needs to apply research methods, knowledge, and skills to solve the social needs in 5 specific fields including Information Technology, Business Administration, Graphic Design, Linguistics, and Multimedia Communications.

The final round of RESFES 2021 will be co-organized by the Office of Science Management and International Affairs under FPT Education and Greenwich Vietnam, Hanoi Campus from December 18<sup>th</sup> to 19<sup>th</sup>, 2021.

## WELCOME LETTER

Warmest greetings from FPT Education and all the best wishes to you.

Research Festival (RESFES 2021) is an annual event aiming to share and exchange innovative ideas, knowledge, and experience on Information Technology, Business Administration, Graphic Design, Linguistics, and Multimedia Communications among students of FPT Education and other local and international universities as well as encourages scientific research activities among students. The theme of this year's festival is **"From Research to Innovation"**. RESFES 2021 will be co-organized by the Office of Science Management and International Affairs under FPT Education and Greenwich Vietnam, Hanoi Campus from December 18<sup>th</sup> to 19<sup>th</sup>, 2021.

On behalf of the Organizing Committee, we would like to formally welcome you to take part in RESFES 2021. It would be a great honor to have you with us at the final round of RESFES 2021.

With our best regards,  
RESFES 2021 Organizing Committee.

# AGENDA

## FPT EDUCATION RESEARCH FESTIVAL

December 18<sup>th</sup> - 19<sup>th</sup>, 2021



### 📍 Greenwich Vietnam, Hanoi Campus

Golden Park Tower, 2 Pham Van Bach Street, Yen Hoa Ward, Cau Giay District, Hanoi, Vietnam

### December 18<sup>th</sup>, 2021

<b>December 18<sup>th</sup>, 2021</b>					
08:15 - 08:45	<b>Registration and Guest Welcome</b> <b>Location:</b> Conference Hall				
08:45 - 09:00	<b>OPENING CEREMONY</b> <b>Location:</b> Conference Hall				
09:00 - 09:45	<b>Keynote Talk: AI for Society</b> <b>Keynote Speaker: AP. Dr. Tran Thanh Long</b> <b>Location:</b> Conference Hall				
09:45 - 10:30	<b>Keynote Talk: Connecting the dots from Research to Innovation</b> <b>Keynote Speaker: Dr. Nguyen Chi Hieu</b> <b>Location:</b> Conference Hall				
10:30 - 10:40	<b>BREAK AND GROUP PHOTO</b>				
10:40 - 11:00	<b>SHOWCASE AND POSTER</b>				
11:00 - 12:00	Session IT Information Technology	Session BA Business Administration	Session GD Graphic Design	Session L Linguistics	Session MC Multimedia Communications
11:00 - 11:30	Talk: IT01	Talk: BA01	Talk: GD01	Talk: L01	Talk: MC01
11:30 - 12:00	Talk: IT02	Talk: BA02	Talk: GD02	Talk: L02	Talk: MC02
12:00 - 13:30	<b>LUNCH BREAK</b>				
13:30 - 17:30	Session IT Information Technology	Session BA Business Administration	Session GD Graphic Design	Session L Linguistics	Session MC Multimedia Communications
13:30 - 14:00	Talk: IT03	Talk: BA03	Talk: GD03	Talk: L03	Talk: MC03
14:00 - 14:30	Talk: IT04	Talk: BA04	Talk: GD04	Talk: L04	Talk: MC04
14:30 - 15:00	Talk: IT05	Talk: BA05	Talk: GD05	Talk: L05	Talk: MC05

<b>15:00 – 15:15</b>	<b>BREAK</b>				
<b>15:15 – 15:45</b>	<b>Talk: IT06</b>	<b>Talk: BA06</b>	<b>Talk: GD06</b>	<b>Talk: L06</b>	<b>Talk: MC06</b>
<b>15:45 – 16:15</b>	<b>Talk: IT07</b>	<b>Talk: BA07</b>	<b>Talk: GD07</b>	<b>Talk: L07</b>	<b>Review Committee Meeting</b>
<b>16:15 – 16:45</b>	<b>Talk: IT08</b>	<b>Talk: BA08</b>	<b>Talk: GD08</b>	<b>Talk: L08</b>	
<b>16:45 – 17:15</b>	<b>Combine Grading</b>	<b>Talk: BA09</b>	<b>Review Committee Meeting</b>	<b>Review Committee Meeting</b>	
<b>17:15 – 17:30</b>		<b>Combine Grading</b>			
<b>END OF THE FIRST DAY</b>					

<b>December 19<sup>th</sup>, 2021</b>					
<b>08:30 – 10:15</b>	<b>Session IT Information Technology</b>	<b>Session BA Business Administration</b>	<b>Session GD Graphic Design</b>	<b>Session L Linguistics</b>	<b>Session MC Multimedia Communications</b>
<b>08:30 – 09:00</b>	<b>Talk: IT09</b>	<b>Talk: BA10</b>			
<b>09:00 – 09:30</b>	<b>Talk: IT10</b>	<b>Talk: BA11</b>			
<b>09:30 – 10:00</b>	<b>Review Committee Meeting</b>	<b>Talk: BA12</b>			
<b>10:00 – 10:15</b>		<b>Review Committee Meeting</b>			
<b>10:15 – 10:45</b>	<b>CLOSING AND AWARDS CEREMONY</b> <b>Location:</b> Conference Hall				



## LIST OF TOPICS IN INFORMATION TECHNOLOGY SESSION

IT01	<p><b>Title:</b> Research on the applicability of Machine Learning and Computer Vision to identify eye movements in communication assists for people who are mute and paralyzed</p> <p><b>Student(s):</b> Nghia Dang, Truong Phan, Phi Tran, Vy Hoang, Thy Pham – Anonymous Team, FPT Polytechnic, Ho Chi Minh Campus, Vietnam</p>
IT02	<p><b>Title:</b> Machine Learning based Predictive Algorithm for Air Traffic Control and Landing Assistance</p> <p><b>Student(s):</b> Pooja Shri V, Ratchana S, Tharun PS, Karthiga S – Spartanz Cruse Team, Thiagarajar College Of Engineering, Madurai, India</p>
IT03	<p><b>Title:</b> A Deep Learning Based Application For Recognition And Preventing Sensitive Image</p> <p><b>Student(s):</b> Nguyen Trong Chien, Nguyen Hoang Giang, Pham Khac Long, Nguyen Dinh Anh Truong, Nguyen Dong Duc Viet – The Guardian Team, FPT University, Hanoi Campus, Vietnam</p>
IT04	<p><b>Title:</b> Supervising home quarantine by using smart wristband</p> <p><b>Student(s):</b> Nguyen Manh Tan, Le Sang – Enterprise Team, FPT High School, Can Tho Campus, Vietnam</p>
IT05	<p><b>Title:</b> An Intelligent System For Automatically Assessing Students To Support Social Constructivism Teaching Method</p> <p><b>Student(s):</b> Nguyen Quy Bao, Le Nguyen Anh Thy, Le Trung Luc, Hoang Tien Thinh, Nguyen Son Ha – The Pioneer Team, FPT University, Da Nang Campus, Vietnam</p>
IT06	<p><b>Title:</b> Robust Autonomous Car-based Raspberry PI in Pre-defined Driving Conditions</p> <p><b>Student(s):</b> Thong Duc Trinh, Tuan Ngoc Dao Le, Ngoan Van Nguyen, Tai Phat Nguyen, Dinh Khanh Nguyen Diep – WAYBE Team, FPT University, Can Tho Campus, Vietnam</p>
IT07	<p><b>Title:</b> An Integration Application Of Intelligent All-In-One Cards For FE Smart Campuses</p> <p><b>Student(s):</b> Ngo Luong Van Dan, Nguyen Van Duc Do, Nguyen Minh Huy, Le Duy Hoang Thinh, Ha Thi Thuy Men – BELD Team, FPT University, Da Nang Campus, Vietnam</p>
IT08	<p><b>Title:</b> Recommender System in Big data environment</p> <p><b>Student(s):</b> T.H. An Nguyen, Quoc Anh Nguyen, Trung Hieu Nguyen – H2Application Team, Greenwich Vietnam, Hanoi Campus, Vietnam</p>
IT09	<p><b>Title:</b> Research in applying AI to identify and input handwritten scores from form</p> <p><b>Student(s):</b> Ho Viet Thanh, Nguyen Ngoc Dai, Le Van Luu, Vo Huu Thong, Dau Linh Dan – FPOLY F1 Team, FPT Polytechnic, Hanoi Campus, Vietnam</p>
IT10	<p><b>Title:</b> Applying Artificial Intelligence and Fuzzy Logic to Analyze Faces and Multi-Intelligence indexes to provide advice on major selection</p> <p><b>Student(s):</b> Tran Thi Thu Hoai, Vo Bao Van Chuong, Duong Nguyen Thuy Dung, Le Trung Dung, Tran Van Son – Zoomi Dsoon Team, FPT University, Da Nang Campus, Vietnam</p>



## LIST OF TOPICS IN BUSINESS ADMINISTRATION SESSION

BA01	<p><b>Title:</b> An innovative framework towards Digital Transformation in Private Educational Institutions: A case study of FPT Higher Education in Da Nang</p> <p><b>Student(s):</b> Thi Hien Le, Thi Minh Chau Tran, Quang Huy Huynh, Thi Nhung Quynh Ho, Nhu Hoa Vo – The Archers Team, FPT University, Da Nang Campus, Vietnam</p>
BA02	<p><b>Title:</b> Impacts of factors in 7C Marketing model on online loyalty of customers on B2C e-commerce websites</p> <p><b>Student(s):</b> Luong Thuy Dung, Nguyen Tran Hoang, Nguyen Anh Duc, Dao Nguyen Tien – UNIQUE Team, Foreign Trade University, Hanoi, Vietnam</p>
BA03	<p><b>Title:</b> Vietnamese’s consumer behavior toward Bio-based Products</p> <p><b>Student(s):</b> Tran Ngoc Phu, Nguyen Thi Kieu Thu, Huynh Thi Cam Tien, Nguyen Thi Kim Loi – F-STARs Team, FPT University, Can Tho Campus, Vietnam</p>
BA04	<p><b>Title:</b> Towards an insight into the adoption of Open Innovation by SMEs in Vietnam</p> <p><b>Student(s):</b> Phuong Thanh Do, Ha Anh Le, Pham Nguyen Ngan Ha, Le Chau Tran, Tien Dat Le – Ngân Thanh Hà Team, Swinburne Vietnam, Hanoi Campus, Vietnam</p>
BA05	<p><b>Title:</b> Impacts of cultural distance on performance of employees in MNC’s subsidiaries</p> <p><b>Student(s):</b> Pham Ho Nhat Phuong, Vo Anh Nhut Minh, Dinh Thi Thu, Nguyen Hoang Anh, Pham Thi Thanh Lan – LA-MTP Team, Foreign Trade University, Ho Chi Minh City, Vietnam</p>
BA06	<p><b>Title:</b> Barriers to green innovation among manufacturing organizations in Vietnam</p> <p><b>Student(s):</b> Pham Uyen Phuong Thao, Nguyen Dang Ha Nguyen, Le Quang Duc Phu, Le Thi Diem Ny, Duong Quoc Tuan – Three Spade Team, Greenwich Vietnam, Da Nang Campus, Vietnam</p>
BA07	<p><b>Title:</b> The effect of Influencers on purchasing in E-Commerce of Gen Z behaviour in Vietnam</p> <p><b>Student(s):</b> Nguyen Hoang Long, Hoang Nguyen Huyen Trang, Luong Thi Thao Nhu – Ba Con Thiên Nga Của Tchaikovsky Team, Greenwich Vietnam, Can Tho Campus, Vietnam</p>
BA08	<p><b>Title:</b> Factors affecting E-loyalty to E-wallet of Generation Z users in Southeast Vietnam</p> <p><b>Student(s):</b> Nguyen Thi Ha Uyen, Tran Thi Thuy Tien, Ho Trong Tan, Vo Pham The Hoang – Onion Team, FPT University, Ho Chi Minh Campus, Vietnam</p>
BA09	<p><b>Title:</b> Assessing Student’s Adoption of E-learning: From research to educational innovation</p> <p><b>Student(s):</b> Duong Thi Ngoc Mai, Nguyen Tien Son, Le Thi Thu Hien, Nguyen Thi Thanh Huong – The SungaM Team, FPT University, Da Nang Campus, Vietnam</p>

<b>BA10</b>	<p><b>Title:</b> Research on factors affecting the online learning quality of university and college students in Ho Chi Minh City</p> <p><b>Student(s):</b> Nguyen Thu Phuong, Huynh Ngoc Bao Han, Truong Trieu Hoa, Le Thi Phuong Anh, Huynh Long Vu – VIRIDESCENT Team, Foreign Trade University, Ho Chi Minh City, Vietnam</p>
<b>BA11</b>	<p><b>Title:</b> The Impacts of External Credits on SME Diversification Strategy: Empirical Evidence from a Developing Country</p> <p><b>Student(s):</b> Lin Hsu-Hao, Anh Tuan Ngo, Luc Van Le – Ancient Group Team, FPT University, Hanoi Campus, Vietnam</p>
<b>BA12</b>	<p><b>Title:</b> Benefits Of Digital Transformation For Student Affairs Management System In The University Of Greenwich Vietnam</p> <p><b>Student(s):</b> Nguyen Ngoc Van Anh, Luu Ngoc Phuong, Tran Tuoc Nhi, Ho Tran Kim Ngoc, Do Gia Huy – Master Mind Team, Greenwich Vietnam, Ho Chi Minh Campus, Vietnam</p>



## LIST OF TOPICS IN GRAPHIC DESIGN SESSION

<b>GD01</b>	<p><b>Title:</b> Analysis and Graphical Rendering of Real-Time Ergonomic Posture Detection</p> <p><b>Student(s):</b> Shreeram S, Satwik V Bolar, Abirami S, Parkavi R– Aces Team, Thiagarajar College of Engineering, Madurai, Tamil Nadu, India</p>
<b>GD02</b>	<p><b>Title:</b> Future semiotics: Designing long-time warning messages</p> <p><b>Student(s):</b> Le Tran Ngan Ngoc, Ho Huu Ngoc Tam, Nguyen Van Huynh, Hoang Anh Tu, Tra Quoc Buu – Hehe Team, Greenwich Vietnam, Da Nang Campus, Vietnam</p>
<b>GD03</b>	<p><b>Title:</b> The benefits of bringing art movements into modern packaging combining AR technology for education purposes</p> <p><b>Student(s):</b> Nguyen Ngoc Yen Nhi – FuDi (Future Dinosaur) Team, Greenwich Vietnam, Ho Chi Minh Campus, Vietnam</p>
<b>GD04</b>	<p><b>Title:</b> Research and Application of History to Boardgames - Great Viet Epic Project</p> <p><b>Student(s):</b> Nguyen Hoang Anh, Ngo Hai Vy, Nguyen Hai Dang – LAC Team, FPT University, Can Tho Campus, Vietnam</p>
<b>GD05</b>	<p><b>Title:</b> Raise awareness of marine environmental protection with graphic on custom sneakers</p> <p><b>Student(s):</b> Nguyen Thi Tuong My, Nguyen Nguyen Kim Ngan, Ho Hoang Chi Bao, Nguyen Ngoc Thanh Vinh, Tran Vuong Ngoc Quyen – Đàn Ông Nâu Team, BTEC FPT College, Ho Chi Minh Campus, Vietnam</p>



<b>GD06</b>	<p><b>Title:</b> Hanoi's Brand Identity System in Application of Flexible Visual Identities</p> <p><b>Student(s):</b> Vo Tri Tam, Mai Ngoc Ha – LONG Team, Greenwich Vietnam, Hanoi Campus, Vietnam</p>
<b>GD07</b>	<p><b>Title:</b> Augmented Reality in Art and Design: Applications in Educational support for Training, Research and Design Development</p> <p><b>Student(s):</b> Nguyen Truong Nhat, Nguyen Ngo Thanh Duoc, Nguyen Thi Tuyet Nhi – Zehero Team, Greenwich Vietnam, Can Tho Campus, Vietnam</p>
<b>GD08</b>	<p><b>Title:</b> Research on sexual harassment in Viet Nam</p> <p><b>Student(s):</b> Dinh Thi Thai Hoa, Nguyen Hoai Linh, Le Thanh Ngoc – Third Eyes Team, FPT University, Hanoi Campus, Vietnam</p>



## LIST OF TOPICS IN LINGUISTICS SESSION

<b>L01</b>	<p><b>Title:</b> Factors affect students' continued intention to use MOOCs</p> <p><b>Student(s):</b> Pham Lai Phuong Thao, Huynh Hong Gam, Nguyen Ngoc Kim Anh, Vo Hoang Minh Thu, Tran Minh Tri – GAT Team, FPT University, Can Tho Campus, Vietnam</p>
<b>L02</b>	<p><b>Title:</b> Online Peer Tutoring Model in Online English Courses at FPT Polytechnic Hanoi: Perceptions of Tutors and Tutees</p> <p><b>Student(s):</b> Luong Quoc Bao, Tran Thi Thu Hang, Nguyen Thi Minh Nguyet – OTS Team, FPT Polytechnic, Hanoi Campus, Vietnam</p>
<b>L03</b>	<p><b>Title:</b> Esperanto as an auxiliary language: Assessing its practical application and learning interest among undergraduates in HCMC</p> <p><b>Student(s):</b> Quach Khanh Nhan, Le Nguyen Khanh Huyen – LOKI Team, Nguyen Tat Thanh University, Ho Chi Minh City, Vietnam</p>
<b>L04</b>	<p><b>Title:</b> The Motivational Impacts of Gamification on Students Learning English Online in FPT University - Ho Chi Minh City Campus (Reading Preparation Course - TRS501/601)</p> <p><b>Student(s):</b> Do Thanh Tai, Nguyen Hoang Khanh Loan, Thai Tran Thao My, Ho Nhu Nhat Ky – English Geeks Team, FPT University, Ho Chi Minh Campus, Vietnam</p>
<b>L05</b>	<p><b>Title:</b> Factors maintaining self-study habits through English listening and speaking practice applications of freshmen at Hanoi University</p> <p><b>Student(s):</b> Nguyen Thuy Hoan, Nguyen Kieu Huong Nhung, Doan Thi Xuan Quynh – I.M Team, Hanoi University, Hanoi, Vietnam</p>
<b>L06</b>	<p><b>Title:</b> Factors Impacting the Intention to Use Role-playing Games Mobile Applications in Learning Communicative English of University Students in Da Nang City</p>

	<b>Student(s):</b> Pha Vo Truong An, Tan Phan Trong, Phu Ta Xuan, Lam Nguyen Hoang, Tan Hoang Khac – 37°C Team, Greenwich Vietnam, Da Nang Campus, Vietnam
<b>L07</b>	<b>Title:</b> Exploring the use of podcasts in improving English listening comprehension skills among English-major students at FPT University, HCM <b>Student(s):</b> Hoang Van Hoan, Nguyen Thi Thu Cuc, Vu Minh Phuong, Nguyen Hai Long, Phan Le Ngan Ha – FSaiGon Team, FPT University, Ho Chi Minh Campus, Vietnam
<b>L08</b>	<b>Title:</b> The Educational Values of Food Consumption <b>Student(s):</b> Chi Thien Huu Le, Linh Thuy Pham, Linh Ai Lam Le, Minh Khanh Nguyen – B.O.T Team, FPT University, Can Tho Campus, Vietnam



## LIST OF TOPICS IN MULTIMEDIA COMMUNICATIONS SESSION

<b>MC01</b>	<b>Title:</b> Strengthening sex education communication for Vietnamese children from 11-18 years old with an integrated communication model <b>Student(s):</b> Vo Ngoc Quynh Trang, Nguyen Quynh Tram, Nguyen Thi Hoang Lan, Duong Trong Hieu, Tran Minh Duc – Mee Di A Team, FPT University, Ho Chi Minh Campus, Vietnam
<b>MC02</b>	<b>Title:</b> The effect of mass media on perception about romantic love of generation Z in Vietnam <b>Student(s):</b> Hiep Hung Nguyen, Lien Hong Nguyen – The Holy Chachacha Team, FPT University, Hanoi Campus, Vietnam
<b>MC03</b>	<b>Title:</b> Animated Videos - an effective communicating tool to raise awareness of fake news during the pandemic <b>Student(s):</b> Nguyen Nguyet Tu, Nguyen Phan Gia Linh, Le Huynh Nhu, Dang Thi Hong Nhung, Phung Huu Tam - Made in Kanthor Team, FPT University, Can Tho Campus, Vietnam
<b>MC04</b>	<b>Title:</b> Advertising the idea of optimizing check-in process and patient's data management <b>Student(s):</b> Tran Hong Quan, Nguyen Duc Thanh Ngoc, Dang Tran Nam, Nguyen Tong Gia Huy– GustO Team, FPT University, Ho Chi Minh Campus, Vietnam
<b>MC05</b>	<b>Title:</b> The impact of Tiktok contents on students during the COVID-19 pandemic <b>Student(s):</b> An T. N. Nguyen, Uyen M. V. Ha, Nhu U. La, Nhi D. Truong – Fantastic Four Team, FPT High School, Can Tho Campus, Vietnam
<b>MC06</b>	<b>Title:</b> IoT and Multimedia based Strategic Plans to prevent spread of COVID-19 <b>Student(s):</b> Dhachina Moorthy T S, Nevetha B, Nimalan N – Optimal Circuit Team, Thiagarajar College of Engineering, Madurai, India



## CONFERENCE VENUE



### 📍 Greenwich Vietnam, Hanoi Campus

Golden Park Tower, 2 Pham Van Bach Street, Yen Hoa Ward, Cau Giay District, Hanoi, Vietnam  
<https://greenwich.edu.vn/>

### ABOUT UNIVERSITY OF GREENWICH

- University of Greenwich, established in 1890, is a leading modern public university in the United Kingdom with over 225,000 alumni across the globe. Having more than 130 years of excellence in teaching and an elite team of academics, the university is currently home to around 38,000 international students from over 160 countries.
- Greenwich Vietnam is an educational alliance between the University of Greenwich, United Kingdom and FPT University, Vietnam. Currently, it has 4 campuses across Vietnam, which are located in Hanoi, Da Nang, HCMC and Can Tho.
- Greenwich Vietnam has an excellent team of lecturers, academics, and industry professionals who have received higher education in countries with leading education such as the UK, the US, Canada, Australia, Singapore etc.,

## ABOUT GREENWICH VIETNAM - HANOI CAMPUS

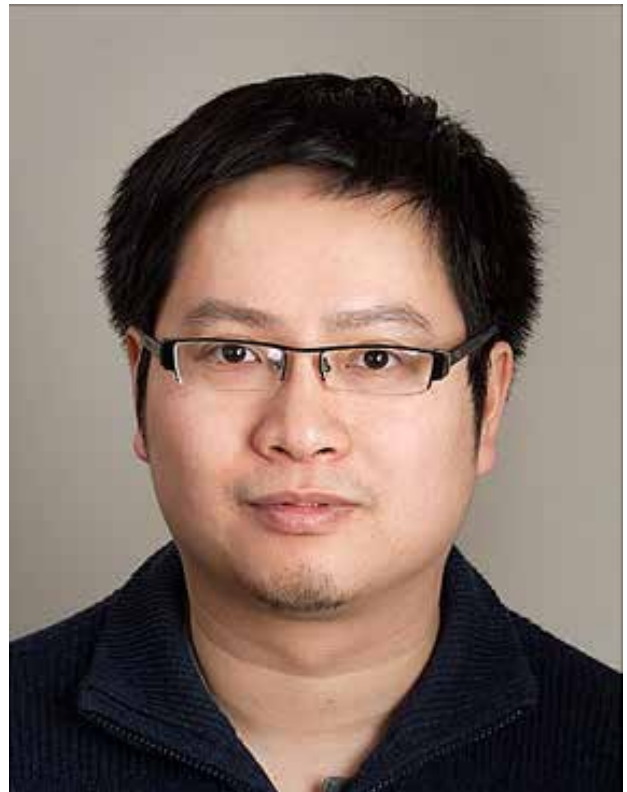
- Located in Hanoi's Cau Giay District, a vibrant urban area that is home to some of the top universities in the country, Greenwich Vietnam - Hanoi Campus is an excellent representation of international higher education, which is growing strong to become a major player in the education landscape of Vietnam.
- Situated at the "golden" intersection of three main streets, Greenwich Vietnam - Hanoi Campus is the neighbor of many leading corporations' headquarters and institutions in Vietnam such as FPT Corporation, Samsung, Mobifone, Viettel, PVI and the future location of the US Embassy in Hanoi.
- Occupying the first 4 stories of the newly constructed 45-story building, Greenwich Vietnam - Hanoi Campus provides more than 50 well-equipped classrooms, 1 conference room and other functional spaces such as the gallery, the library, studio rooms, self-study corners, pantry, etc with a total capacity of up to 5,000 students.
- Studying at Greenwich Vietnam - Hanoi Campus, students are not only able to enjoy the vitality of the new center of the capital city but also are able to keep themselves updated to constant changes in the economic landscape and business environment at the heart of Vietnam.
- Inspired by the historical location of the University of Greenwich main campus in London, the United Kingdom, the Hanoi Campus gets visitors excited with its own version of the Prime Meridian or the Longitude 0° which symbolizes Greenwich Vietnam as the starting point of its students' journey to discover other parts of the world.

## KEYNOTE SPEAKERS

### ASSOCIATE PROFESSOR. DR. LONG TRAN-THANH

University of Warwick, UK

Long Tran-Thanh is a Hungarian-Vietnamese computer scientist at the University of Warwick, UK, where he is currently an Associate Professor in Artificial Intelligence. He obtained his PhD in Computer Science from Southampton in 2012, under the supervision of Nick Jennings and Alex Rogers. Long has been doing active research in a number of key areas of Artificial Intelligence and multi-agent systems, mainly focusing on multi-armed bandits, game theory, and incentive engineering, and their applications to crowdsourcing, human-agent learning, and AI for Good. He has published more than 70 papers at top AI conferences (AAAI, AAMAS, ECAI, IJCAI, NeurIPS, UAI) and journals (JAAMAS, AIJ), and have received a number of national/international awards.



#### Title: AI for Society

**Abstract:** With the rapid rise of AI, it is inevitable that its impact is also becoming ubiquitous. Among many of its applications, the usage of AI to tackle societal and environmental challenges has been attracting lots of attention lately. While most of current research work focuses on using Machine Learning (ML) methods to analyse and predict events from collected data, in this talk I will discuss another potential area of using AI in this area, namely: decision making. In particular, I will go through a number of research projects I have been working with my students and coauthors, ranging from forest fire mitigation and air pollution monitoring, to vaccination allocation and national security.

## DR. NGUYEN CHI HIEU

### CEO & Co-Founder at Innovative Education Group

Dr. Nguyen Chi Hieu earned his Bachelor from London School of Economics (UK) in 2007, his Ph.D. from Stanford University (USA) in 2012, and an MBA from University of Oxford (UK) in 2016. For the past decade, Dr. Nguyen has grown himself into an expert in the education sector as he sets up and transforms 100+ K-12 schools, colleges, education institutes and non-profit organizations, ranging from boutique models to big-scale systems, in multiple capacities: school model design, new school creation, school restructuring, product research and development, professional development, general management, corporate finance & strategy, system operations.



### Title: Connecting the dots from Research to Innovation

**Abstract:** What is missing in the jump from research to innovation? Why do some seemingly brilliant ideas eventually fall dead on paper while others, initially like ugly ducklings, rise to the top? What does it take for one to become both a good researcher and a good innovator? What is the real value of an innovation? What determines the capacity of one individual, one team and one organization for continuous innovation and impacts at scale? Those are questions that we may need to constantly ask and figure out their answers by ourselves as we embark on the journey from research to innovation and beyond. The path varies person by person but we can still draw common denominators. The more insights we gain from theories and empirical evidence, the more prepared we are with many unknowns that lie ahead on this journey. It is a journey worth taking for us all, but “chance favors the prepared mind” (Louis Pasteur). ▲



## IT01

### **Research on the applicability of Machine Learning and Computer Vision to identify eye movements in communication assists for people who are mute and paralyzed**

Nghia Dang, Truong Phan, Phi Tran, Vy Hoang, Thy Pham  
*FPT Polytechnic, Ho Chi Minh Campus, Vietnam*

#### **Abstract**

Image processing approaches like the Facial Landmark algorithm have been widely used to help the mute and disabled communicate. Due to the high cost of products and the complexity of implementing operations on the application, access to these items is still limited for the Vietnamese population of people with language difficulties or hemiplegia due to the high cost of products. In order to provide improved communication support software to the Vietnamese mute community, as well as those with strokes or stroke sequelae, We developed a program that incorporates machine learning, computer vision, and OpenCV and Dlib methods. Image filters remove external factors like light and poor image quality, while algorithms make it easier to extract frames from the landmarks we've discovered. Faster eye direction determination is possible because of the division of the eye frame into three equal parts and the more precise measuring of the amounts of black in each frame according to the binary picture. When compared to earlier implementations, the methodologies we used result in an algorithm that is both faster and more accurate.



## IT02

### **Machine Learning based Predictive Algorithm for Air Traffic Control and Landing Assistance**

Pooja Shri V, Ratchana S, Tharun PS, Karthiga S  
*Thiagarajar College Of Engineering, Madurai, India*

#### **Abstract**

The most crucial phases of a flight are taking off, reaching its destination safely, and landing. It's in the hands of the captain and the first officer to do all these things perfectly and take us to our destination safely, but nature is always unpredictable. There are adverse weather conditions that can happen after taking off and can put thousands of lives in danger. Therefore, we have come up with a solution that helps pilots make decisions instantly and

find the route that is optimal for their fuel capacity and can help them escape the bad weather and reach their destination safely. Air Traffic Flow and Capacity Management (ATFCM) which actually is a section under the Air Traffic Management (ATM) has so far taken care of airspace and air terminal limits to satisfy traffic needs and, whenever limit openings are depleted, advance traffic streams to meet the accessible proportions. Any aircraft that is in the air will be connected with one or the other ACT (Air traffic controller) throughout the journey, but if in an adverse weather condition if the connection is lost our model will help the pilot to have the situation under benchmark. Having that in mind, our primary goal is to bring automation in flight travel with which we can primarily avoid bad weather flight travel and even in unfortunate case we can gear up flight pilot to manage flight travel by possible tilt positions for safe travel. route prediction for flight. The proposed methodology helps ATC management and flight pilots to give pre-tactical traffic information in the form of graph visualizations (weather change), which will give information on weather updates. So, at any adverse condition (weather changes) the ATC can help the pilot choose the best pattern for the travel, or in an unfortunate case where the pilot lost the connection with ATC can make the decision himself with graph view and yet another crucial phase of a flight is landing, there can be adverse weather conditions during which people in the cockpit may not be able to view the runway clearly or may not even locate it precisely. Therefore, we provide a model which helps locate the runway in bad weather conditions.

To make it automated we bring in ML and DL together to find out the best suitable algorithm which will represent the graph with distance information using graph neural networks and to calculate the overall impacts regression algorithms can be implemented. Once the path is decided and the aircraft is safely approaching its destination we use in machine learning algorithm YOLOv3 to detect the runway in bad weather, we provide satellite images of the destination and train the algorithm in such a way that it detects the runway in which the aircraft must land from a distance itself. This idea can be further extended to detect the absolute lane, when the aircraft approaches the runway, for this, we first do the pre-processing of the video seen from the cockpit and use the video for edge detection using Kalman filter.

**Keywords**—Air Traffic Flow Management, Flight Route Prediction, Runway Prediction, Air transportation, Airline industry, Aviation sector, Origin-destination, Airline networks.





# IT03

## A Deep Learning Based Application For Recognition And Preventing Sensitive Image

Nguyen Trong Chien, Nguyen Hoang Giang, Pham Khac Long,  
Nguyen Dinh Anh Truong, Nguyen Dong Duc Viet  
*FPT University, Hanoi Campus, Vietnam*

### Abstract

Exposing children to sexual content that is available from the Internet is a persistent and uncontrollable problem for parents. The problem consequences are skewing children's innocent perspective or encouraging young people to aggression and discriminatory behavior. Therefore, our team finds it is necessary to build an application that will work as a filter of adult content images for different internet platforms. This research aims to develop a web browser extension to detect pornographic photos on a website and censor them. This work is done based on the image classification technique. We use deep learning technology to build image classifiers that can be executed in real-time. Our approach is implementing the most miniature model from different architecture families, then comparing the performance of each model to find the best model that balances accuracy and speed. Our approach is implementing the most miniature model from different architecture families, including ResNet, MobileNet, GoogleNet, and EfficientNet, then comparing the performance of each model to find the best model that balances accuracy and speed. An artificial intelligence server performs core processing of the classifier. It receives the address of the image to be classified from the client for processing and then returns the censored image.

**Keywords**—Photo censorship, porn detection, Classification, ResNet, MobileNet, GoogleNet, EfficientNet.



# IT04

## Supervising home quarantine by using smart wristband

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### Abstract

This project is implemented to apply smart wristbands to make an automatic process in supervising the self-isolators which is one of the vital factors to prevent the spreading of the covid-19 epidemic in Viet Nam. We firstly gather information from the reports about home quarantine status in Viet Nam to see how it is contributing to the spreading of the epidemic and why people do not abide by home quarantine regulations. The result shows that there were many cases that people did not obey home quarantine regulations and they accidentally caused disease outbreaks. The reasons for the issue is that there are not enough human resources to supervise the self-isolators 24/7 and the self-isolators subjectively think that they do not get covid-19 viruses. Moreover, we also read the related papers worked by foreign and domestic countries to understand how they are dealing with this. Then we brainstorm and come up with a feasible solution of using a smart wristband and a station to supervise each self-isolator. We are in the period of making the prototype and finishing roughly 80%.

**Keywords**—supervising the self-isolators, smart wristbands, automatic process, obey home quarantine regulations and prevent the covid-19 epidemic.



# IT05

## An Intelligent System For Automatically Assessing Students To Support Social Constructivism Teaching Method

Nguyen Quy Bao, Le Nguyen Anh Thy, Le Trung Luc, Hoang Tien Thinh, Nguyen Son Ha  
*FPT University, Da Nang Campus, Vietnam*

### Abstract

In this paper, we propose a solution for the problem of automatically evaluating the quality of answers to support the Social Constructivism Teaching Method based on specific criterion by using the Natural Language Processing (NLP) model and knowledge graph (KG). Basically, this Artificial Intelligent (AI) system uses the lecture questions, assessment criterion, and students' final responses as input. To be more specific, we've proposed and built a pipeline for Natural Language Processing, as well as consecutively optimized and

rebuilt every step in the pipeline. In addition, a Question Type Classification Model also has been discussed and thoroughly carried out. After that, a complete KG has been constructed together with methods and criteria to evaluate answers. Last but not least, a students' answers evaluation system has been fully conducted after all. Following processing, the output will be an answer's accuracy in relation to each criteria. All in all, this project will save teachers' time by assisting them to provide more thorough assessments and objective ratings for each student constructively.

**Keywords**—Natural Language Processing Model, Knowledge Graph, Pipelines, Constructivism Method.



## IT06

### Robust Autonomous Car-based Raspberry PI in Pre-defined Driving Conditions

Thong Duc Trinh, Tuan Ngoc Dao Le, Ngoan Van Nguyen,  
Tai Phat Nguyen, Dinh Khanh Nguyen Diep  
*FPT University, Can Tho Campus, Vietnam*

#### Abstract

Nowadays, driving in complex road conditions is the most challenging in modern autonomous car assistant systems, especially in low light and illumination changes. This research aims to propose a robust obstacle detection and classification system during complex driving roads. First, we introduce and implement a robust and efficient algorithm for increasing the accuracy of existing obstacle detection algorithms. Second, we transfer our method to a real autonomous car-based on raspberry pi for verifying its accuracy by conducting experiments under various day and night environments. The proposed self-driving car system has been tested under predefined driving conditions with obstacles and traffic signs, showing a stable performance even in low light conditions. With comprehensive experimental results, we found that our system achieved more stable performance with 73.18% detection rate, while the state-of-the-art Yolo-based algorithm produced 32.11% detection rate under challenging driving conditions (low-light conditions) using the CCD dataset. For our custom Raspberry PI dataset, we got 99.50 % detection rate for day driving scenes, 88.50% for night driving scenes when considering IoU = 0.6.

**Keywords**—difficult driving condition, obstacle detection, traffic sign detection and classification, deep learning model.



# IT07

## An Integration Application Of Intelligent All-In-One Cards For FE Smart Campuses

Ngo Luong Van Dan, Nguyen Van Duc Do, Nguyen Minh Huy,  
Le Duy Hoang Thinh, Ha Thi Thuy Men  
*FPT University, Da Nang Campus, Vietnam*

### Abstract

The world is in the 4.0 technology stage, working environments such as companies, offices, and schools all want to bring modern and improved equipment to promote quality, productivity as well as provide the most comfortable and convenient space. Some modern technologies such as one-touch smart cards have helped develop many models and have achieved certain successes such as bus ticket payment, attendance, door opening, etc. With the desire to build a smart campus, FPT Education (FE) institution has begun to research many solutions to deploy soon. Currently, the operation on the campus of the FE institution is mostly by traditional methods such as manual attendance, passive parking mechanism, dormitory entrance and exit system, etc. With the number of students increasing day by day. If the above methods continue to be applied, it may cause congestion, waste time, and not ensure security. For this reason, our project will build a multi- function card integration application for smart campuses of FE institutions with technologies such as Near Field Communication (NFC) and smart mobile payment applications help people easily pay with just one touch, modern, fast, improve physical objects to reduce the time spent on performing tasks, reduce the cost of resources, avoid waste of human resources, and improve campus quality.

**Keywords**—all-in-one cards, NFC, pay with just one touch, smart campus.



# IT08

## Recommender System in Big data environment

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### Abstract

For years, recommender systems (RS) have emerged as a powerful tool to enable users to find appropriate information according to their needs. Different recommendation methods have been proposed and can be categorized as collaborative filter, content-based, and Hybrid/Ensemble approach. However, the exponential growth of digital information in the recent decades often referred to Big Data, poses new challenges for the current RS.

Following this spirit, our work proposes a novel fast clustering-based Recommendation method (denoted as GCF) designed on top of Apache Spark. Comprehensive experiments on a real-world dataset have verified the advantages of our proposed method. It is effective in alleviating the problem of data sparsity and item cold-start. The training and inference time is quick while the slight increase of Mean Absolute Error (MAE) and Root Mean Square Error (RMSE) is acceptable.

**Keywords**—Recommender System, Big Data, Clustering-based Recommendation, Item cold-start, Data sparsity, Apache Spark.



## IT09

### Research in applying AI to identify and input handwritten scores from form

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*FPT Polytechnic, Hanoi Campus, Vietnam*

#### **Abstract**

Currently, at FPT Polytechnic College, students' final grades are being entered manually, which takes a lot of time, effort and resources, with a high error rate. This paper will present research on the application of CNN model to recognize and input handwritten scores from photo of paper form to solve the above problem as well as the remaining problems encountered.

**Keywords**—Handwritten Digit Recognition, Handwritten Digit Segmentation, Handwritten Digit Classification, Document recognition, Table recognition, OpenCV, Python, Keras, Conventional Neural Networks.



# IT10

## Applying Artificial Intelligence and Fuzzy Logic to Analyze Faces and Multi-Intelligence indexes to provide advice on major selection

Tran Thi Thu Hoai, Vo Bao Van Chuong, Duong Nguyen Thuy Dung,  
Le Trung Dung, Tran Van Son  
*FPT University, Da Nang Campus, Vietnam*

### **Abstract**

For many years, deciding on a student's major has been a difficult challenge that has resulted in a variety of unforeseeable future implications, such as changing majors or dropping out after only one or two semesters at university. Recognizing this issue, we develop an application project that leverages Artificial Intelligence (AI), the Theory of Multiple Intelligences, and Fuzzy Logic to help students select the proper major for them. More specifically, in this project, we will collect card images of students at FPT University by major and analyze all these images to create a separate face data set for each major, which is saved for availability in the application's system. First, students must take a photo of their face; the system will then use AI to compare the student's face with the student card image data set for the disciplines. When the face to be compared is brought to the application input by the user, the AI system will perform facial structure analysis and calculate the distance between the vectors after conversion to return the average comparison value of that face against all faces in the application's available dataset. After that, students complete a survey with a few questions based on Harvard University psychology professor Howard Gardner's idea of "Multiple Intelligences" in order to measure talents and competencies. Finally, the assessment data is processed again through Fuzzy Logic Theory to give accurate advice on the appropriate discipline for students. The results of the project are developed in the form of mobile applications and websites to facilitate use in various situations, especially those suitable for online and offline enrollment activities at FPT University across the country.

**Keywords**—Artificial Intelligence, Face Analysis, Multiple Intelligence Theory, Fuzzy Logic.



## BA01

### An innovative framework towards Digital Transformation in Private Educational Institutions: A case study of FPT Higher Education in Da Nang

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#### **Abstract**

Digital transformation has been a dominant industry trend in recent years and recently became explosive in the outbreak of the COVID-19 pandemic, requiring timeline response and adaptation. However, most educational institutions seem to lack theoretical knowledge related to digital transformation, leading to the failure of proposing appropriate strategies for the transformation process. Furthermore, the transition to digital transformation in education, as well as the research from the organization's perspective, has not been prioritized, which results in significant research gaps. Therefore, this study aims to provide an integrated model based on the Technology - Organization – Environment theory in the education field to identify significant factors affecting digital transformation adoption. Additionally, it attempts to propose appropriate strategies and recommendations for enhancing digital transformation of private educational institutions. The research question of this research is proposed: "Which factors affect digital transformation adoption of private educational institutions?" and "How can private universities enhance digital transformation effectively, especially to cope with the challenges of COVID-19?". The research targets private educational institutions with the organization's viewpoint, in which the main scope is the FPT higher education institutions in Danang. The method focuses on quantitative analysis to identify relevant factors of digital transformation adoption for educational institutions, which might become a reliable reference source for upcoming studies and paving the way for further research to conduct in the education field. Furthermore, the research also strives to analyze suitable strategies from previous research, which can support practitioners to build an effective action plan for operations and speed up the transformation process.

**Keywords**—digital transformation, educational institutions, TOE framework.



## BA02

### Impact of factors in 7C Marketing model on online loyalty of customers on B2C e-commerce websites

Luong Thuy Dung, Nguyen Tran Hoang, Nguyen Anh Duc, Dao Nguyen Tien  
*Foreign Trade University, Hanoi, Vietnam*

#### Abstract

The study has discovered the positive impact of factors in the 7C Marketing model on website perceived quality, customer satisfaction and loyalty on B2C e-commerce platforms with 504 samples. Invalid. Thereby, the study has built an integrated assessment framework on the website for businesses, thereby proposing appropriate policies to support B2C e-commerce businesses, especially during the Covid-19 pandemic happening.

**Keywords**—7C Marketing Model, E-Commerce, B2C Website, Perceived Quality, Customer Satisfaction, Electronic Loyalty.



## BA03

### Vietnamese's consumer behavior toward Bio-based Products

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*FPT University, Can Tho Campus, Vietnam*

#### Abstract

Green economy, also known as sustainable economy, is a current development trend in which consumers prefer products that are wholly or partly derived from materials of biological origin since they have become more concerned about their health and the environment in which they live. This study aims to examine consumer behavior toward bio-based products with three key goals in mind. First, it helps to understand the perception of consumers toward Bio-based Products. Second, it properly helps consumers be aware of products derived from materials of biological origin so that the consumer can make purchasing decisions to protect their health and contribute to the protection of the environment. Third, the study on consumer behavior towards bio-based products will provide a more accurate view and assessment to companies looking to develop Bio-based products. Based on that, the research is carried out through surveying, collecting data from consumers, and then using the deductive approach, descriptive statistics, and quantitative method analysis. The results demonstrated that a positive relationship and a direct impact are established between the variables of Attitude and Social Norms and the Purchase Intention



toward Bio-based products. Furthermore, the findings reveal that customers have positive feelings towards bio-based products in terms of trust, knowledge, and the environment.

**Keywords**—Bio-Based Products, Purchase Intention, Consumer Knowledge, Consumer Attitude.



## BA04

### Towards an insight into the adoption of Open Innovation by SMEs in Vietnam

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#### **Abstract**

The adoption of Open Innovation (OI) has been an emerging topic in the past decades. While there is a wealth of studies on the model of OI practices adoption in large multinational firms, little research focuses on small and medium-sized enterprises (SMEs) and developing countries. In the context of globalization and digitalization, the Vietnamese SMEs ecosystem has developed dynamically in terms of technology and OI. However, not all SMEs can grasp the opportunities and challenges that OI poses. In particular, SMEs still face both theoretical and practical difficulties in adopting OI. Thus, this study aims to identify the influential factors of OI adoption by SMEs in Vietnam, in order to provide useful theoretical and practical recommendations for SMEs to adopt OI effectively. Based on a survey of 56 Vietnamese SMEs, this study identified two drivers including improving capability and expanding network orientation and four main barriers, including knowledge, collaboration, organization, and financial strategy. Notably, the study found that collaboration barriers and network expansion orientation are factors that vastly impact the adoption of OI.

**Keywords**—Open Innovation, hindering factors, driving factors, SMEs, Vietnam.



## BA05

### Impacts of cultural distance on performance of employees in MNC's subsidiaries

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Nguyen Hoang Anh, Pham Thi Thanh Lan  
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#### Abstract

Performance of employees is described as the “ultimate dependent variable” in human resource management, enhancing it is the priority of corporations to create long-term competitive advantages. Furthermore, recent literature suggests that cultural distance is an important factor affecting employee performance. This paper aims to clarify the impacts of home-host-country cultural distance on the performance of employees in multinational corporations' subsidiaries in Vietnamese market. This study also investigates the moderation effect of career experience and institutional distance on the mentioned relationship. Our results support the hypothesis that cultural distance significantly negatively impacts employee performance and this relationship is affected by the industry sector. In addition, the relationship is also moderated by experience and institutional distance. These findings will contribute in helping MNCs improve their employee performance by mitigating the impact of cultural distance through choosing a suitable country and entry modes to expand their scale.

**Keywords**—Cultural distance, employee performance, MNCs, institutional distance.



## BA06

### Barriers to green innovation among manufacturing organizations in Vietnam

Pham Uyen Phuong Thao, Nguyen Dang Ha Nguyen, Le Quang Duc Phu,  
Le Thi Diem Ny, Duong Quoc Tuan  
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#### Abstract

The primary purpose of this research was to identify the main barriers affecting green innovation among manufacturing organizations in Vietnam. To achieve this, we reviewed the relevant literature on some trusted sources to identify the barriers to green innovation for manufacturing organizations in the global context. The finding was analyzed based on numerical data with the participation of 143 employees at middle- and upper-level managers from manufacturing companies around Vietnam. First, the research provides a

strong theoretical framework of the barriers to green innovation. Additionally, the study helps internal and external stakeholders understand what barriers and how to combat them to easier implement green innovation by removing all impediments. It is useful and rational evidence for prioritizing and directing innovation policies in the manufacturing industry. The study found that the Financial Support barrier had the most significant impact, followed by the Market barrier and Government Support barrier in most manufacturing enterprises in Vietnam. All three factors have real significance to the overall study. The study's biggest limitation is only based on a questionnaire survey with cross-sectional data for testing and verifying hypotheses. The ability to imply causal relationships between dependent and independent variables would be restricted and we cannot observe the dynamic effect of green innovation by periods. In addition, we only focus on specific manufacturing companies instead of various types of industries for generalizing the research results. Moreover, the sample limits on Vietnamese production firms and the sophistication of barriers to green innovation would be changed for different nations.

**Keywords**—Green Innovation; Manufacturing organizations; Government Supports; Financial barriers; Market barriers.



## BA07

### The effect of Influencers on purchasing in E-Commerce of Gen Z behaviour in Vietnam

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*Greenwich Vietnam, Can Tho Campus, Vietnam*

#### Abstract

Behavioural science and individual psychology suggest that many factors should be considered in determining e-commerce adoption. This study aims to analyze the characteristics of influencers affecting the online shopping behaviour of Gen Z in Vietnam by collecting 601 observations of Gen Z in three regions of Vietnam, aged from 16 to 20 years old. 25, the survey was conducted through an online questionnaire. The authors carried out ANOVA, EFA, and linear regression analysis with purchase intention as the dependent variable and six independent variables derived from references, including Attraction, trust, expertise, familiarity belonging, celebrity fit with the brand/product, and negative disinformation.

**Keywords**—Influencer, influencer marketing, Gen Z, E-commerce, online purchasing behaviour, brand awareness, characteristics.



## BA08

### Factors affecting E-loyalty to E-wallet of Generation Z users in Southeast Vietnam

Nguyen Thi Ha Uyen, Tran Thi Thuy Tien, Ho Trong Tan, Vo Pham The Hoang  
*FPT University, Ho Chi Minh Campus, Vietnam*

#### Abstract

This paper analyzes the factors that have an influence on loyalty to e-wallets, with the purpose of supporting e-wallet providers in better understanding the current insight of potential consumers in large markets, surviving, and becoming the best in this market share fight. The goal of this study is specifically to define and analyze the relationship between electronic service quality (e-service quality), electronic trust (e-trust), electronic satisfaction (e-satisfaction), corporate reputation, switching costs, and hedonic motivation to the loyalty of e-wallet users (e-loyalty). The results will be based on a questionnaire data collecting approach used to conduct an online survey of 445 people aged 9 to 24 (Generation Z) [1] in six provinces in Southeast Vietnam (Ho Chi Minh City, Ba Ria - Vung Tau, Binh Duong, Dong Nai, Binh Phuoc, Tay Ninh). This study will take a quantitative approach, with stratified sampling as the method in this study for sampling. The results suggest that customers' loyalty has been positively affected by hedonic motivation, e-quality, switching costs, e-satisfaction, e-trust.

**Keywords**—factors, e-wallet, e-loyalty, e-quality, e-trust, e-satisfaction, corporate reputation, switching costs, hedonic motivation, Generation Z, Southeast Vietnam.



## BA09

### Assessing Student's Adoption of E-learning: From research to educational innovation

Duong Thi Ngoc Mai, Nguyen Tien Son, Le Thi Thu Hien, Nguyen Thi Thanh Huong  
*FPT University, Da Nang Campus, Vietnam*

#### Abstract

E-learning has received considerable attention in recent times as it has become an important part of higher education. With the growing popularity of web-based learning systems, behavioral intention models seem particularly useful in determining why people use e-learning technology. Especially for private educational institutions that have faced difficulties during the COVID-19 pandemic, it is necessary to prioritize improving the quality of education to maintain a competitive edge in the education market. The C-TAM-TPB

model integrated by both TAM and TPB comes with an excellent degree of relevance to explaining adoption behaviors and intentions to use new technology. The proposed model, based on the C-TAM-TPB model combined with a literature review of 112 related published studies over the past twenty years, was performed to determine the relevant external variables' influence potential. This study assessed 172 students of FPT University Danang by hypothesizing a theoretical model proposed through the PLS-SEM method to explain students' adoption and intention in using e-learning. The results show that Computer Self- efficiency and Perceived Accessibility have a significant influence on the ease of use of e-learning systems. Furthermore, Perceived Enjoyment affects the Perceived Usefulness of e-learning systems. In addition, Perceived Behavioral Control and Subjective Norm had a significant positive effect on the Behavior Intention to Use of the e-learning. The findings of the study not only have practical significance in assessing the current status, but also provide useful guidelines for innovating and improving an effective e-learning system to increase learning motivation for students in an e-learning environment.

**Keywords**—education, e-learning, private university, technology acceptance.



## BA10

### Research on factors affecting the online learning quality of university and college students in Ho Chi Minh City

Nguyen Thu Phuong, Huynh Ngoc Bao Han, Truong Trieu Hoa,  
Le Thi Phuong Anh, Huynh Long Vu  
*Foreign Trade University, Ho Chi Minh City, Vietnam*

#### Abstract

The article studies how both objective and subjective factors affect the quality of online learning of students in Ho Chi Minh City. These factors include teaching skills of lecturers, classroom management skills of lecturers, students' ability to self-study, and technical means. Based on the analysis of data using SPSS 21.0 software, the study shows different levels of influence of four main factors. From this result, the article will propose some useful solutions for educational institutions, lecturers and students to improve the quality of online learning.

**Keywords**—teaching skills, classroom management skills, ability to self-study, technical means, online learning quality.



# BA11

## The Impacts of External Credits on SME Diversification Strategy: Empirical Evidence from a Developing Country

Lin Hsu-Hao, Anh Tuan Ngo, Luc Van Le  
*FPT University, Hanoi Campus, Vietnam*

### Abstract

This paper examines whether, and to what extent, external credits affect SME diversification strategy. Using a comprehensive micro-level data retrieved from different waves of Small and Medium Enterprise (SME) surveys in Vietnam, we show that that firms are more likely to pursue diversification strategies if they can obtain more external credits, either from formal or informal lenders. We also find that the impact of long-term loans is much more prominent than that of short-term loans. However, when firms borrowing excess a certain threshold, the positive impact of external credits starts to decline, implying an inverted U-shaped relationship.

**Keywords**— External Credits; Formal Loans; Informal Loans; Diversification; SMEs.



# BA12

## Benefits Of Digital Transformation For Student Affairs Management System In The University Of Greenwich Vietnam

Nguyen Ngoc Van Anh, Luu Ngoc Phuong, Tran Tuoc Nhi,  
Ho Tran Kim Ngoc, Do Gia Huy  
*Greenwich Vietnam, Ho Chi Minh Campus, Vietnam*

### Abstract

In the 4.0 age, digital transformation in the education sector is completely necessary. With the integration of several digital systems within the Student Affairs Management System (SAMS) including CRM and CMS, a significant innovation would be inevitable bringing a host of perks for both organization and student development. The rationale of the study is built upon the need for innovation of higher education systems. Apart from that, the most important purpose of this research is to explore how digitalization of the Student Affairs Management System initiates benefits to both the University of Greenwich Vietnam, and its students. Besides, researchers conduct this study based upon a mainly deductive approach. In addition, the simple random sampling technique (data for the analysis were collected from the main object consisting of 378 returns from all four campuses

of the University of Greenwich Vietnam), quantitative method, and data mining method are also utilized in this study. The research findings indicate that SAMS give both students and university staff numerous benefits. In particular, the results of this study concluded that the digital transformation of SAMS impacts positively cost-efficiency, flexibility, uniqueness, and student experience. Otherwise, this research contributes to UoG's change for the maintenance and development of SAMS to stakeholders in tertiary education in terms of operation, human resource, cost, and effectively initiates various benefits for students.

**Keywords**—SAMS, Student Service and Support System, Student Experience, Digital Transformation, University of Greenwich Vietnam (UoG).



# GRAPHIC DESIGN

## GD01

### Analysis and Graphical Rendering of Real-Time Ergonomic Posture Detection

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#### **Abstract**

In today's sedentary lifestyle we have comparatively less movement than normal style of living. This may lead to symptoms such as discomfort and pain, which can be the first signs of a musculoskeletal disorder. We can overcome these problems by following correct ergonomic principles. Therefore a framework to adjust sitting postures based on musculoskeletal models is presented in this solution. The suggested solution will capture the user's input by monitoring his/her posture. It will provide valuable insights and use object detection algorithms to determine the position and inclination between various computer devices viz monitor, mouse and keyboard; it will facilitate the user's body parts to make sure that the user follows the best posture and maintains a healthy blink rate for maximum comfort and efficiency. It also makes sure that the user follows a frequent and efficient break schedule by notifying and dimming the screens during intervals. The main use case of this solution is to train on valid postures which in turn corrects the posture of the user.

**Keywords**—Ergonomics, BlazePose, Pose Detection, Musculoskeletal Disorders, MediaPipe, Work stress.



## GD02

### Future semiotics: Designing long-time warning messages

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*Greenwich Vietnam, Da Nang Campus, Vietnam*

#### **Abstract**

Long-time nuclear waste warning messages are intended to deter human intrusion at nuclear waste repositories in the far future (within or above the order of magnitude of 10,000 years). As nuclear technology evolves and becomes more commonplace, so do its dangers. With nuclear-involved disasters like Fukushima occurring closer and closer to Vietnam, not to mention the multiple nuclear stations being built along her borders, even if



Vietnam does not follow a nuclear path, she is not safe from the dangers of nuclear catastrophe. Vietnam, however, is not prepared. This text seeks to investigate existing systems and put forward a suggestive solution for future civilizations if (when) such a nuclear catastrophe affects Vietnam.

**Keywords**—semiotics, nuclear power, visual communication, radiation, warning systems.



## GD03

### The benefits of bringing art movements into modern packaging combining AR technology for education purposes

Nguyen Ngoc Yen Nhi

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#### **Abstract**

Arts have always played a vital role in the formation and development of human society. It moves side by side with history, countries' culture, and heritage. From here, different art movements have been created. Maintaining and communicating artistic values is a must at all times because this protects and develops cultural, educational, and economic factors. In Vietnam, like in all other countries, arts mainly act as a medium to deliver messages for commercial, educational, political uses. Packaging has always been a potential instrument to convey messages and content, such as art education to the community since it is easy to approach everyone. In the present age, Augmented Reality (AR) has been applied effectively in various industries. AR packaging can provide customers with a fantastic user experience. This investigation raises a question – why we should care more about art education in Vietnam and in this research, I am proposing the combination of packaging and AR in order to integrate art education values by a theoretical case study of "SUPANGON Hookin' Cookies vs Art Nouveau". Note that SUPANGON is a hypothesized brand. The results expect that by introducing the pioneer AR packaging having artistic, educational, and commercial values, this will propose solutions for improvement in art knowledge among young generation in Vietnam and with the expectation that this will bring packaging to the next level, contributing significant values to the society.

**Keywords**—art movements, packaging, augmented reality, education, innovation, Vietnam.



# GD04

## Research and Application of History to Boardgames - Great Viet Epic Project

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### Abstract

In the past 10 years, history has been considered an obsessive subject for students. This research was conducted to bring history into some forms of entertainment closer to the masses, especially the younger generation. The project "Great Viet Epic (Dai Viet Hung Ca)" is a connection between the young generation and national history. This is a boardgame with historical elements at its core, the illustrations, gameplay, and content of the boardgame are inspired by historical celebrities, folk stories, and historical documents that the team researched, collected and verified. The study mainly exploits the novelty of learning-by-playing form in boardgames with historical themes. The project can also be considered a "new-style textbook" and can be applied to teaching in high schools.

**Keywords**—Analyzing competitors, researching historical documents, creating gameplay for board games, designing cards, illustrating historical celebrities, developing product promotion strategies.



# GD05

## Raise awareness of marine environmental protection with graphic on custom sneakers

Nguyen Thi Tuong My, Nguyen Nguyen Kim Ngan, Ho Hoang Chi Bao,  
Nguyen Ngoc Thanh Vinh, Tran Vuong Ngoc Quyen  
*BTEC FPT College, Ho Chi Minh Campus, Vietnam*

### Abstract

Investigate a novel way of communicating the idea of "protecting the marine environment" by "Customize" outdated or basic sports shoes for the goal of "changing skin," making them unique while also expressing a positive message to today's youth. A greater knowledge of the subject of "sea pollution" is still discussed in the media today, but progress is still restricted; thus, is there a more effective communication approach that can assist you? Is it true that today's youth are more attracted? In response to research, we created the story "Goldfish Adventure," four customisable image models on sports shoes based on a character capable of overcoming the elements of marine pollution were released (oil spills, garbage,...). Factory trash, plastics, and fishing with mines). The goal of today's campaign

is to remind young people about marine pollution. At the same time, “Goldfish Adventure” introduces new colors and a new source of energy, allowing young people to recognize the importance of the marine environment in daily life, as well as the opportunity to own a pair. Custom sports shoes feature distinct traits that set them apart from other athletic footwear on the market.



## GD06

### Hanoi's Brand Identity System in Application of Flexible Visual Identities

Vo Tri Tam, Mai Ngoc Ha  
*Greenwich Vietnam, Hanoi Campus, Vietnam*

#### **Abstract**

In recent years, due to continuous technological advances and the rapidly globalizing environment, cities around the world are naturally forced to compete with each other, and Vietnamese cities - including Hanoi - are no exception. As a result, the practice of place branding is gaining more and more significance as the need for cities to market themselves on the market rises. At the forefront of a branding program is the brand's visual identity that directly interacts with the audience, and its impacts on delivering the brand experience is indispensable. Hanoi is currently lacking a strong, cohesive brand visual system which is essential for an emerging city looking to elevate its position in the global market.

Modern approaches to constructing a VIS consists of a new and emerging method: the flexible visual identities (FVI) which differs from the logocentric method by its flexibility - the ability to adapt to multiple contents, media and formats. This paper focus on the study of the flexible visual identity system when applied to Hanoi's visual identity system to show how it can be implemented; assessing its advantages as well as disadvantages as a solution for the current needs.

**Keywords**—Hanoi, Brand Identity System, Flexible Identities.



# GD07

## Augmented Reality in Art and Design: Applications in Educational support for Training, Research and Design Development

Nguyen Truong Nhat, Nguyen Ngo Thanh Duoc, Nguyen Thi Tuyet Nhi  
*Greenwich Vietnam, Can Tho Campus, Vietnam*

### Abstract

This project addresses the lack of an authentic cultural essence in design in Vietnam due to the fact that the basic knowledge of Vietnamese Fine Arts is inaccessible and support for artistic education is still limited and undeveloped, leading to the case that design students enter the industry with a lack of cultural self-awareness. Beyond the industry, the community has little sense of pride in the national artistic identity, and the designs presented also lack original Vietnamese qualities, instead relying heavily on stereotypical designs. Carrying research through Design, this project aims to present a product that combines traditional book form and augmented reality technology to present additional knowledge on Vietnamese artists through the periods; create a picture recognition program; and lastly: through a combination of cutting-edge technology and historical content, aim to support the creation of modern designs that are still imbued with Vietnamese national identity to promote its design industry to reach further. The project concludes that hybridity in educational method is of utmost importance to address the gap in access to technology in Vietnam due to income disparity. Thus the project presents a research through design process, culminating in an interactive book on Vietnamese Art History.

**Keywords**—Augmented Reality, Art Education, Design, Education Graphic Design, Vietnam.



# GD08

## Research on sexual harassment in Viet Nam

Dinh Thi Thai Hoa, Nguyen Hoai Linh, Le Thanh Ngoc  
*FPT University, Hanoi Campus, Vietnam*

### **Abstract**

Sexual harassment is an issue attracting a lot of attention because of its seriousness and urgency, especially in the context of a raging epidemic, but the rate of sexual assault not only has not decreased but also has signs of an increase. In Vietnam, three-quarters of women have experienced sexual harassment or comments, more than 40% of women feel unsafe in places with a lot of men, but people still don't pay attention to the seriousness of the situation. The seriousness of the problem is due to many reasons such as victim-blaming, lack of evidence, fear of crime, etc. Sexual harassment is a pressing problem globally, but there is a lack of warning devices on the market to protect yourself in quiet, low-traffic places. It is for the above reasons that we have researched and applied technology to do that.

**Keywords**—Sexual harassment, problem globally, protect yourself, researched, applied technology.



## LO1

### Factors affect students' continued intention to use MOOCs

Pham Lai Phuong Thao, Huynh Hong Gam, Nguyen Ngoc Kim Anh,  
Vo Hoang Minh Thu, Tran Minh Tri  
*FPT University, Can Tho Campus, Vietnam*

#### **Abstract**

Massive Open Online Courses (MOOCs) attract many researchers because of its massiveness, openness, machine and peer assessment, yet there are still many questions prone to MOOCs to be answered. Hence, the study aims to examine students' perceptions of using MOOCs, factors that influence students' future intention to use MOOCs, seek for students' definition for MOOCs completion and identify barriers that affect their completion. This study was conducted at FPT University in Can Tho during the 2021 academic year, and used mixed techniques, and involved 226 participants who participated at least a MOOC on Coursera platform. The instrument employed in the quantitative phase was a questionnaire consisting of 18 items from Technology Acceptance Model (TAM) that was established by [1], and Learning Strategies [2]. The findings showed that perceived ease of use (PEOU), and perceived usefulness (PU) have a great impact on students' intention to use MOOCs in the future, PU, however, has a stronger and more direct correlation to the acceptability of MOOCs. Furthermore, surface learning strategy has a negative effect on the intention to enroll in MOOCs while deep learning strategy has no relation with students' continued intention to use MOOCs. More importantly, a valuable finding was revealed that surface learning strategy was in inverse proportion to courses variable and it can be lessened. The qualitative phase was collected through the semi-structured interviews and analyzed to identify different definitions of completion of MOOCs and barriers preventing students from achieving the completion. Our findings are expected to open a multi-dimensional view for students, education institutions in particular those at FPT university in Can Tho and even MOOCs developers to design curricula as well as improve MOOCs on Coursera platform better and better.

**Keywords**—MOOCs, Technology Acceptance Model, learning strategies, completion, barriers.



## L02

### Online Peer Tutoring Model in Online English Courses at FPT Polytechnic Hanoi: Perceptions of Tutors and Tutees

Luong Quoc Bao, Tran Thi Thu Hang, Nguyen Thi Minh Nguyet  
*FPT Polytechnic, Hanoi Campus, Vietnam*

#### **Abstract**

Peer tutoring is a commonly provided support service for students who encounter learning difficulties. The main purpose of this study is to discover both the tutors' and tutees' perceptions of challenges faced during the online tutoring program in English courses. In addition, the reasons for struggling students' refusal to this service are also investigated to assist them in the next semesters, and to improve the quality of training as a whole. Email interviews were conducted to collect the qualitative data. Responses were then coded and the main themes were identified for the analysis. The findings reveal that both tutors and tutees have positive perceptions of online tutoring. Various challenges have been identified, and recommendations were offered. The results of this paper are valuable for not only the stake holders in the studied institution but also for any educational institutions that are considering this student support service.

**Keywords**—peer tutoring, online learning, tutors, tutees.



## L03

### Esperanto as an auxiliary language: Assessing its practical application and learning interest among undergraduates in HCMC

Quach Khanh Nhan, Le Nguyen Khanh Huyen  
*Nguyen Tat Thanh University, Ho Chi Minh City, Vietnam*

#### **Abstract**

Since it has been launched in 19th century, Esperanto has been widening its spoken zone to every continent that has human living, to become the world's most widely spoken constructed international auxiliary language. Learning another language besides English is considered necessary more than ever, since English comprehension skills become an official request, no longer a plus point in getting a job or promotion. Esperanto provides learners with an important resource for building vocabulary in English and other European languages. Learning Esperanto as a foreign language can help learners have a Latin

language base and morphology. The research data were collected by an experiment class and survey, to evaluate the feasibility of teaching and learning Esperanto in HCMC.

**Keywords**— Esperanto, teaching and learning Esperanto, Esperanto application.



## L04

### The Motivational Impacts of Gamification on Students Learning English Online in FPT University - Ho Chi Minh City Campus (Reading Preparation Course - TRS501/601)

Do Thanh Tai, Nguyen Hoang Khanh Loan, Thai Tran Thao My, Ho Nhu Nhat Ky  
*FPT University, Ho Chi Minh Campus, Vietnam*

#### Abstract

Gamification is gaining traction in recent years, and has become one of the most effective methods in improving motivation and performance of students. This research presents a survey with data collected from 70 FPT University HCM students and, through the utilization of online questionnaires and stimulated recall review, highlights various opinions regarding the effectiveness of this educational approach. The results confirm that the majority of participants really enjoyed gamified activity in the classroom with improved motivation and knowledge acquisition, and thus prefer studying in a gamified environment to a traditional classroom. Lecturers should incorporate game elements into online classrooms otherwise they will be boring and non-interactive.

**Keywords**— gamification, online learning, motivation, FPT university.





# L05

## Factors maintaining self-study habits through English listening and speaking practice applications of freshmen at Hanoi University

Nguyen Thuy Hoan, Nguyen Kieu Huong Nhung, Doan Thi Xuan Quynh  
*Hanoi University, Hanoi, Vietnam*

### Abstract

The use of mobile applications to improve English skills has exploded, enabling learners to self-regulate their educational processes outside of the standard curriculum and opening the way for ubiquitous learning. However, few young people can sustain this level of exercise on a daily basis. The majority of past research has been on how to learn well with apps and how to study with English learning apps. Nonetheless, this study takes a different approach to the problem, focusing on the features that facilitate long-term self-direction through the use of listening and speaking English applications. Maintaining factors that determine the best settings for supporting learners in self-study habits through English listening and speaking practice apps (ELSPAs) of first-year students at Hanoi University (HANU) will be discussed in this study. The following main approaches will be used in the mixed study process: survey questions, interviews, and case study. According to the findings of the study, both intrinsic and extrinsic factors play a considerable role in maintaining students' self-study habits. Among all, cost is the most important element leading learners' habits of self-studying English listening and speaking skills through English listening and speaking practice apps. A number of recommendations are also suggested for both students and app developers about the topic.

**Keywords**—self-learning, self-study habits, self-study maintenance, self-study retention, Mobile-assisted language learning (MALL), English listening skill, English speaking skill, English listening and speaking practice applications, freshmen.



# L06

## Factors Impacting the Intention to Use Role-playing Games Mobile Applications in Learning Communicative English of University Students in Da Nang City

Pha Vo Truong An, Tan Phan Trong, Phu Ta Xuan, Lam Nguyen Hoang, Tan Hoang Khac  
*Greenwich Vietnam, Da Nang Campus, Vietnam*

### Abstract

Being a skilled English communicator has been one of the principal demands to advance in the era of intense globalization and technological advancements, and in turn, English learners are exposed to more opportunities to hone their skills. In the field of integrating technological advances into linguistic training, the combination of game-based and gamification learning has been one of the technologies of choice. Numerous games, including digital Role-playing Games (RPGs), have emerged based on the combination and been utilized for educational and recreational purposes simultaneously. The research group conducted the research which examined factors affecting the behavioral intention to use RPGs-based mobile applications to acquire a higher level of communicative English proficiency of university students in Da Nang city, based on four independent variables, including Price, Popularity, Perceived Content Quality, and Perceived Innovation. This research was implemented in two months and a half. We collected approximately 275 responses based on simple random sampling; then, these samples would be analyzed using SPSS and AMOS in order to evaluate and conclude the variables' impacts. Afterward, the research group provides a set of solutions that helps to raise learners' intention to use RPGs as a powerful supporter in becoming proficient at English communication.

**Keywords**—role-playing games, RPGs, digital RPGs communicative English, education, factors, impacting, university students, Da Nang, content quality, price, popularity, innovation.



# L07

## Exploring the use of podcasts in improving English listening comprehension skills among English-major students at FPT University, HCM

Hoang Van Hoan, Nguyen Thi Thu Cuc, Vu Minh Phuong,  
Nguyen Hai Long, Phan Le Ngan Ha  
*FPT University, Ho Chi Minh Campus, Vietnam*

### Abstract

FPT University students have been taking online learning for numerous semesters since the Covid-19 pandemic in Vietnam in 2020. The English language is a discipline that necessitates ongoing training, and distant learning demands effective learning methods as well as student motivation. Listening is an important element of communication in people's daily lives when learning English [1]. Despite widespread agreement that language is best taught in a realistic context, and an increasing focus on the need of using technology to develop listening skills, there has been relatively little research in this area in the Vietnam context. To contribute to this field of inquiry, the researchers conducted research with an experiment to collect data with 12 students of FPT English major and used T-test and descriptive analysis to analyze the data. After performing experiments, collecting data, and analyzing, we have obtained results to explore whether podcasting helps students in the FPT English major improve their listening comprehension skills, investigate students' attitudes towards using podcasts to improve their English listening comprehension skills and determine if students have any challenges using podcasts. This would be an important study outcome for FPT University teachers and students to better understand and implement Podcasts to assist teaching and learning.

**Keywords**—Podcasts, improve, English, listening skills, comprehension, student, FPT university.



# L08

## The Educational Values of Food Consumption

Chi Thien Huu Le, Linh Thuy Pham, Linh Ai Lam Le, Minh Khanh Nguyen

*FPT University, Can Tho Campus, Vietnam*

### **Abstract**

Research on food consumption implicitly shows that food consumption embeds educational values that are co-constructed through food eaters' immersion in the world. This understanding urges researchers to move beyond positivist approaches that measure people's nutritional intake and eating habits to a more sociological approach that attends to their interactions with the social milieu. In this paper, we construct a model developed from Vygotsky's (1978 [1]) social constructivism with three aspects for examination: factors that influence how food is eaten, how people learn from their eating practices, and what their food consumption means to them. In-depth interviews were conducted with 22 students at universities in Vietnam. This paper contends that food consumption is personally and socially constructed. Outside, inside, and in-between influencers are found to shape the ways students consume food. Various educational values are formed by these interrelated influences.

**Keywords**—Food consumption, educational values, eating habits, nutrition, social constructivism.



## MC01

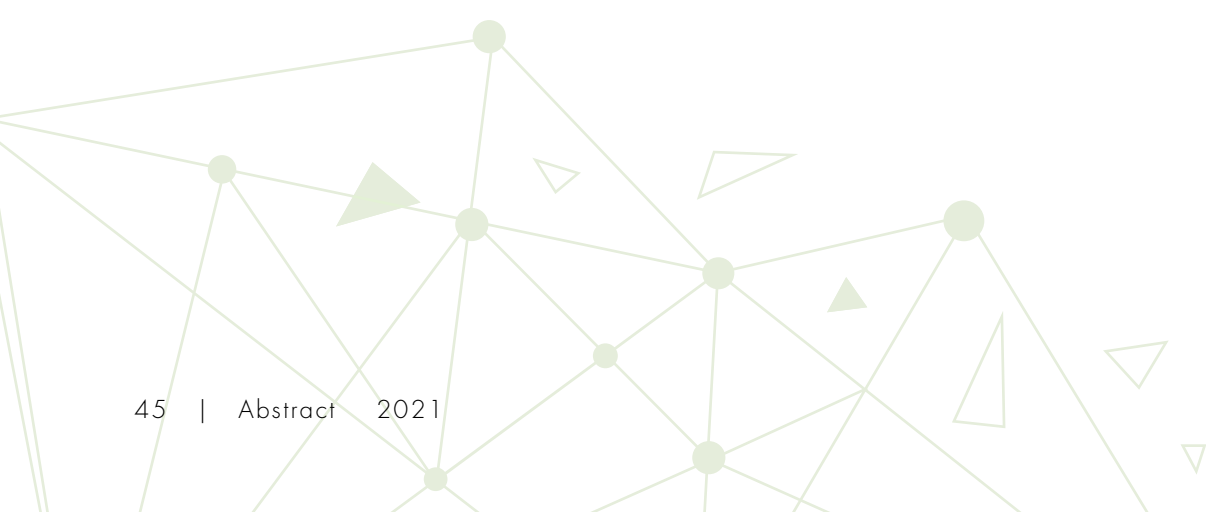
### Strengthening sex education communication for Vietnamese children from 11-18 years old with an integrated communication model

Vo Ngoc Quynh Trang, Nguyen Quynh Tram, Nguyen Thi Hoang Lan,  
Duong Trong Hieu, Tran Minh Duc  
*FPT University, Ho Chi Minh Campus, Vietnam*

#### **Abstract**

Physiological changes, unintended pregnancy, sexual abuse, etc. All of these issues usually lead to depression which is an unfortunate consequence of not being well educated at sex education. Sex education in Vietnam is often considered a sensitive issue, so it should be avoided to mention. However, if it is communicated effectively and the information is widely spread, we can change this prejudice towards the Vietnamese. With the aim of changing Vietnamese student's awareness by approaching and increasing sex education communication to them aged 11 - 18 years old, researchers have researched through quantitative methods and qualitative assessment about the status and needs of the target group. Therefore, researchers figure out a new and innovative solution to enhance communication for sex education by an integrated communication model: Online through communication platforms such as a Website, social networks (Facebook, Instagram, TikTok), and of line through sharing/exchange sessions in middle and high schools and media products.

**Keywords**—Sex Education, Integrated communication model, Vietnamese Children, 11-18 years old, Children's demands.



## MC02

### The effect of mass media on perception about romantic love of generation Z in Vietnam

Hiep Hung Nguyen, Lien Hong Nguyen  
*FPT University, Hanoi Campus, Vietnam*

#### **Abstract**

The mass media have been saturated with messages and stories about romantic love - fed to us through various channels, including television, movies, music, books, and the Internet. In addition, it is currently believed to be a critical love coach, as well as a source of idealized views of love and romance, for today's youth. This research aims to examine the potential impact of romanticized media on generation Z's understanding and expectations of romantic relationships. By systematically investigating relevant scholarly literature, we analyze and review how individuals develop perceptions of romantic relationships through media exposure. By engaging in an online survey with 152 young people aged from 17 to 26, this study attempts to explore the relationship between the consumption of romance-related content and generation Z's perception of romantic love. Overall, the result suggests that romanticized content preference is significantly associated with highly idealized beliefs and unrealistic expectations of romantic relationships.

**Keywords**—romantic content; mass media; generation Z; perception.



## MC03

### Animated Videos - an effective communicating tool to raise awareness of fake news during the pandemic

Nguyen Nguyet Tu, Nguyen Phan Gia Linh, Le Huynh Nhu,  
Dang Thi Hong Nhung, Phung Huu Tam  
*FPT University, Can Tho Campus, Vietnam*

#### **Abstract**

The problem of fake news about COVID-19 in Vietnam is currently very serious, it has negatively affected psychosocial life of citizens as well as preventing the government from taking further actions in combating the pandemic. Obviously, the most urgent need at the current time is to have an effective tool to handle this problem and animated video reveal as a potential candidate. Although there are many research proving the effectiveness of animated video, there has not been any research conducted on the effectiveness of animated

videos against Fake News. Based on the result of a survey focusing on the use of animated videos against fake news collected from 55 students from Can Tho FPT University and with the engagement of previous scientific findings, this research proved that animated video is an excellent method for raising awareness about “fake news” in the Gen Z age group and opens up a new route for effectively combating this phenomenon.

**Keywords**—video animation, fake news, effective tool, against fake news, COVID-19.



## MC04

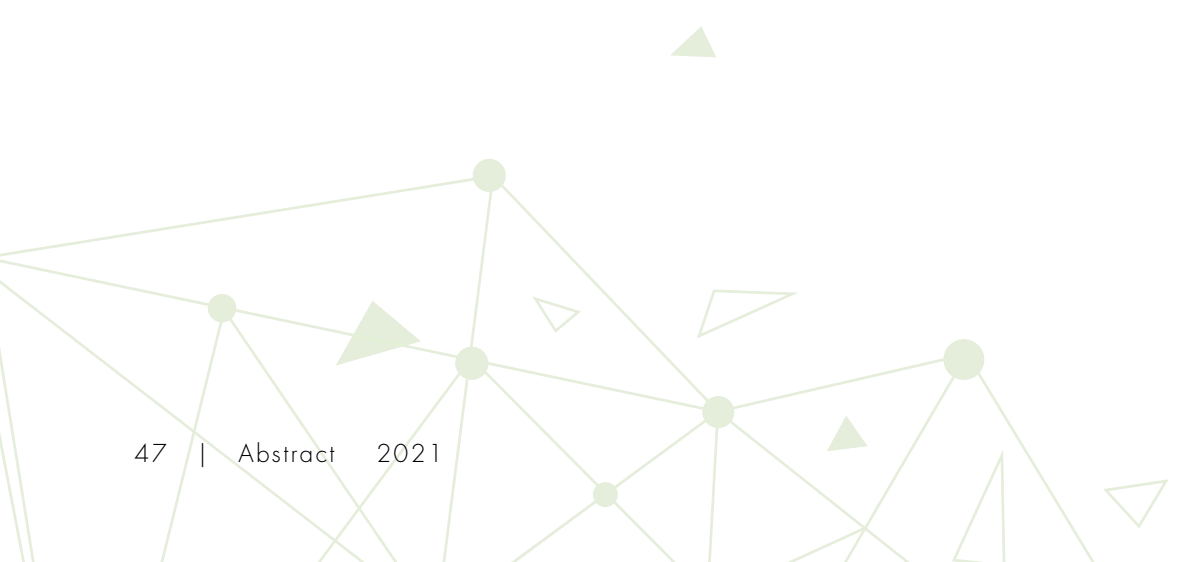
### Advertising the idea of optimizing check-in process and patient's data management

Tran Hong Quan, Nguyen Duc Thanh Ngoc, Dang Tran Nam, Nguyen Tong Gia Huy  
*FPT University, Ho Chi Minh Campus, Vietnam*

#### **Abstract**

The Ministry of Health (MOH) (2018) has announced that all public hospitals in Viet Nam must transform from using paper medical record to digital medical record. The research aims at creating a system to facilitate the check-in and management process at public hospital as well as creating campaigns to encourage patients to use the system. Data visualization and analytics techniques are used in order to obtain interesting insights into the hospital's operation data, from which, managers can make more precise decision. A survey has also been conducted to collect some insights into the age groups of frequent hospital goers, from which, an advertising campaign can be designed to suit these group of customers. The research has built a system to reduce the waiting time by allowing patients to scan their personal document at the check-in desk. Many interesting insights were also founded using the data visualization and analytics system. Two campaigns on two different channels were created which can impact a large number of patients.

**Keywords**—Image processing technology, data visualization, data analytics, communication, advertising campaign, application.



## MC05

### The impact of Tiktok contents on students during the COVID-19 pandemic

An T. N. Nguyen, Uyen M. V. Ha, Nhu U. La, Nhi D. Truong  
*FPT High School, Can Tho Campus, Vietnam*

#### Abstract

Tiktok rose in the COVID-19 pandemic as a platform suitable for video-sharing and recreation that ensures community connection and prevention of pessimism during social distancing, as well as the encouragement for users' act to combat COVID. It is of special importance to thoroughly understand Tiktok's potential in providing information and optimism about COVID, and its potential to cause harm as well, especially on young users who occupy a great part of the Tiktok community and can be the most vulnerable to such widespread impacts. To do that, this research was created including observing famous trends and community campaigns on Tiktok, and a survey involving people aged 16-22 in the Mekong Delta mainly focusing on user habits, different types of contents popular on Vietnamese Tiktok and how users react to them. The data revealed the actual situation of user behaviour that seemed to have been wrongly assumed, as well as about several toxic and inappropriate contents that seem to have not been properly managed, yet showed interesting results of young users' high awareness. The research holds a special meaning in giving a clearer view of Tiktok contents and people's perception, suggesting solutions to ensure Tiktok's negativity is minimized and its positive effects can be taken advantage of in the future for greater purposes for the sake of our young community.

**Keywords**—Tiktok, Contents, Young Users, COVID pandemic.



## MC06

### IoT and Multimedia based Strategic Plans to prevent spread of COVID-19

Dhachina Moorthy T S, Nevetha B, Nimalan N  
*Thiagarajar College of Engineering, Madurai, India*

#### Abstract

The spread of COVID-19 is increasingly worrying for everyone in the world. This virus can be spread from one person to another through means of droplets when a person sneezes or coughs or even when he talks. According to the instructions from WHO (World Health Organization), to reduce the spread of COVID-19, every person needs to wear a face



mask, practice social distancing, elude the crowd area and also always maintain the immune system. This pandemic outbreak forced many countries' governments to lockdown their nations to control the spread. Many surveys tell that wearing masks in the public can control spread of the virus from person to person. In this paper, a device that uses cameras for detecting elevated body temperature, people who wear face masks and those who don't and calculates proximity among people is proposed. The proposed model can be used at any confined places like airports and banks and other places in order to maintain safety standards. Evaluation of the framework proposed by us is done by separate algorithms using libraries like Keras, Tensorflow and so on. The temperature of each individual coming across our device is checked using a sensor. This system proposed by our team can detect passers-by affected with COVID-19 upto an extent by using Internet of Things (IoT) technology and some deep learning mechanisms. The animated film plays an important role in this work in addition to the accomplishment of the proposed model. With the help of the animated film, people will easily understand how to operate the proposed system. Multimedia application is also used to show the output of the proposed model to the end users in the visualization form or reports along with the alarming sound (The sound is generated to alert the people to maintain the distance or away from the crowd). Based on the above Strategic plans, we will prevent the spread of COVID-19 and save the life of human beings.

**Keywords**—COVID-19, IoT, Face mask detection, Camera, Sensors.



# Note

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