

INTERNATIONAL STUDENT PERCEPTIONS TOWARDS A SUSTAINABLE UNIVERSITY BRAND: UNIVERSITI SAINS MALAYSIA

Mohamad Saifudin¹, Mohamad Saleh², Ali Mehellou³, Sharifah Nadiah⁴, Syed Mukhiar⁵ and Rani Ann Balaraman⁶

¹School of Communication, Universiti Sains, Malaysia

Abstract. Many tertiary businesses had been around the world recognized because eco friendly research institutes subsequent philosophical stances plus implementations, hence causing interpersonal has effects on with regard to potential future durability. In spite of, quite a few ecological educational institutions was battling to determine particular pictures plus manufacturers next several difficulties, therefore removing important part bridal within contemporary society. Therefore, this particular homework expects to learn Universiti Sains Malaysia (USM) intercontinental students' viewpoint being a lasting bank having logos effort, especially via social gaming. After the whistling in addition to social networking ideas, a new study technique was appointed covering 391 foreign USM learners. Resultantly, the majority of participants owned or operated inadequate understanding of USM like a self-sufficient foundation subsequent inferior durability advertising treatments. In this particular problematic vein, USM was required to enhance a lot more team plus learner knowledge plus participation by using lasting college company marketing and advertising applying societal systems. In addition, exterior durability advertising simply by tertiary finance companies should certainly match interior brethren regarding university or college local community version. As a result, this specific study prolonged present functions regarding reading simply by addressing previous academic suggestions and even integrating appropriate hypotheses plus self-sufficient marketing and advertising techniques like an innovative plus achievable composition.

Key phrases: Self-sufficient College, Lasting University or college Company, Advertising, Overseas Learners, Social net- working

Keywords: Key phrases: Self-sufficient College, Lasting University or college Company, Advertising, Overseas Learners, Social networking

INTRODUCTION

Up to now, durability means the particular central complexness associated with numerous formal daily activities, such as the Un (Amaral, Martins as well as Gouveia, 2015) being an essential view several companies in addition to promoting research (Connelly, Ketchen and Slater, 2011). Following an essentials associated with durability ideas in order to communities, surroundings, and even financial systems, degree creations (universities) regarded as together with caused improved understanding plus knowledge-sharing regarding durability (Mazon, Ribeiro, sobre Tormento, Castro and Conflagración, 2020; Tretyakova and Kotomina, 2020). Regarding this, typically the growth plus need for environmentally friendly educational institutions had been thoroughly viewed as by way of a lot groundwork in addition to several neighborhood and even global companies, including the UNESCO Knowledge to get Ecological Progress (2005-2014) (Dagiliūtė, Liobikienė as well as Minelgaitė, 2018; Pristine, 2013). On this factor, world-wide durability between college students plus tertiary organizations demonstrated predominant (Perrault and Cs, 2017).

The particular eco friendly higher education institutions idea encompassed ecological, interpersonal, together with monetary difficulties where college routines plus programs caused damaging result decrease within several sizes (Mazon tout autant que 's., 2020; Tretyakova and Kotomina, 2020). In addition , Tretyakova in addition to Kotomina (2020) meant that will ecological establishments corresponded to be able to self-sufficient advancement ideas by 5 connected with each other représentation (green university or college and even sensible colleges, balanced life-style, together with public plus social multiplicity plus fantastic plus ethnic customs management). The existence of lasting corporations demonstrated necessary for environmentally friendly growth subjects differences plus sustainability- oriented involvement amongst learners (Sady, Žak and Rzepka, 2019).

Over an international level, a few tertiary establishments (the Institution associated with The us, Higher education institutions associated with The state of colorado, in addition to Stanford University) have been famous like eco friendly organizations that will actualised sustainability-oriented devoir and even dreams together with socially caused the required transformation to some even more ecological upcoming (Tretyakova as well as Kotomina, 2020). Despite, some other equivalent develop to create self-sufficient college or university brand names and pictures subsequent a

number of complexities, which includes fiscal plus recruiting, durability notion implementations within curricula plus review shows, inadequate supervision in addition to marketing and advertising solutions, and even ineffective internal- external stakeholder connection (Fissi, Romolini, Gori and Contri, 2021; Pristine, 2013). Particularly, Maiorescu, Sabou, Bucur together with Zota (2020) a fact of which inadequate university student involvement within durability procedures was obviously a large difficult task.

Durability advertising encompassed methods plus exercises that will triggered lasting establishments to get certain sustainability-related locates, which includes customer (student) in addition to stakeholder pleasure and even brand name impression together with revenue development (Jung, Betty as well as Ellie, 2020). Usually, durability marketing and advertising engaged 3 key measurement or maybe the multiply the important point (environment, world, plus economy) in addition to several subjects (external-internal and even social-environmental concentration, legal-ethical-discretionary motive, advertising and marketing investments, plus fiscal performance) (Chabowski, Veta and Gonzalez-Padron, 2012; Kumar and Christodouloupoulou, 2014).

In spite of the go up involving durability research subsequent higher customer awareness upon sustainability- oriented complexity (Kim as well as Oh yeah, 2020), the quantity of scientific studies (particularly upon worldwide learners and native eco friendly association brands) stayed rare. Nearly all previous performs associated with novels descends from Developed facets together with varied academic managing together with backdrops via modern countries similar to Malaysia. As a result, this particular explore had been conducted for additional information in global students' paying attention regarding ecological school brand name plus company promoting within Universiti Sains Malaysia (USM) using tips about related improvements

LITERATURE REVIEW

Provided the particular essentiality associated with durability within present communities through interpersonal, environment, plus monetary viewpoints, lasting brand name advancement along with environment ideals in addition to communications possibly founded marketplace options for various businesses and company development via interpersonal relationships (Escribano, Gaspar and Salvador, 2020; Jung ainsi que ing., 2020). With this problematic vein, numerous organizations, which includes advanced schooling equivalent wanted to include durability by means of personalisation and even marketing techniques (sustainable institutions). Within Fissi ou 's. (2021), the word 'sustainable university' exhibited a greater schooling organization highlighting durability by way of

ecological, interpersonal, together with monetary procedures plus implementations consistent with training, study, plus local community participation functions with regard to sociable change in addition to environmentally friendly life styles. Therefore, these organizations considerably affected the introduction of eco friendly organizations via related procedures plus programs. Rawal et. al (2021), Poongodi M et. al(2022), Poongodi M et. al (2021), Ramesh TR et.al (2022), Boikova A.V. 2020, Ahila A et.al (2022), Muniyappan et. al(2022) , Y. Shi et. al (2020), Guobin Chen et.al (2020), Yuanjin Xu et. al (2021), Ding Li et. al (2021) , Bin Yuan et. al (2021), Chi Z et. al (2021)

Lasting organizations were particularly unique from all other alternatives concerning cultural efforts plus world- wide difficulty promises coming from environment, interpersonal, and even economic views. Previous analysis further- more indicated that durability (as the brand) probably motivated numerous establishments to acquire several public, ecological, or even economical goals plus benefits (MM Kamruzzaman et. al 2022). Unilever exhibited quick business development much like Common Electrical (with typically the Ecomagination R and d programme) annually right after starting the particular ecological residing strategy (Schroeder, 2015). Nonetheless, various companies (universities) integrated durability like a brand name together with particular difficulties, which include durability idea vagueness, insufficient college employees', students' together with business players' consciousness plus involvement, inadequate institutional frames, bad shipping associated with sustainability-oriented understanding, plus ineffective internal-external stakeholder relationship (Fissi ainsi que approach., 2021; Maiorescu ain way., 2020). As a result, self-sufficient establishments needed a lot more options in addition to techniques to handle this kind of obstacles.

Current studies have emphasised the basics associated with Durability Advertising Techniques (SMS) plus actions inside sustainability-related research (Mazon ou ing., 2020; Taoketao, Feng, Track and Nie und nimmer, 2018). Generally, TEXT MESSAGE worried durability modifications throughout tactical advertising advertising blend (the degree that corporations incorporated sustainability-based particulars using advertising decisions) (Kumar, Rahman and Kazmi, 2013; Taoketao tout autant que ing., 2018). On the other hand, durability marketing and advertising denoted lasting rapport-building and even servicing having clients plus societal together with real life configurations (Kumar ain 's., 2013). For instance , durability advertising and marketing procedures denoted among the methods by using good brand name picture effects, especially if these techniques had been fiscal, interpersonal, plus environment (Jung tout autant que approach., 2020; Kumar as well as Christodouloupoulou, 2014). Within the research environment, Bian plus Moutinho (2011) exposed that will brand name picture mediated consumers' company option.

At the same time, eco-friendly, plus marketing had been furthermore viewed as effective durability manufacturer strategies (Fissi au même tire que way., 2021; Meister reineke (umgangssprachlich) de plus 's., 2020; Kumar and Christodoulou, 2014; Kumar de surcroît ing., 2013). Concerning TEXT overall performance, companies have been suggested to control book systems, like the Web plus numerous sociable systems (Facebook, Youtube . com, Tweets, in addition to appropriate websites), institutional web pages, occasions (workshops and even seminars), together with ads (Mazon ainsi que 's., 2020). General, TXT has been considered essential for companies to consider durability like a company (sustainable institutions).

Present promoting study furthermore established essential advertising functions associated with college students (consumers) within language schools (universities) to enhance brand name graphic plus status, marketplace protection, earnings, plus success (Foroudi, Yu, Gupta and Foroudi, 2019). Basically, tertiary organizations denoted the particular roots regarding elites (leaders, supervisors, in addition to policymakers) that caused nearby or even international interpersonal growth in order to counter-top constant ecological, interpersonal, and even monetary difficulties experienced simply by humanity (Fissi de même que ing., 2021; Popescu ainsi que approach., 2020). Therefore, learners might be viewed as viewpoint frontrunners along with amazing advantages in the direction of lasting university or college advancement by company picture together with popularity in house (on campus) or even outwardly (outside campus) inside nearby or even worldwide internet sites (communities) (Dagiliū té ainsi que 's., 2018; Foroudi ou way., 2019). Subsequent info plus conversation technologies improvement, student tasks within college manufacturer marketing and advertising shown increased effectiveness plus velocity and much more comfort. Particularly, possible college students used essays, university or college displays, or perhaps grounds appointments prior to the creation of the web, social networking systems, and also the precise product information plus conversation technological innovation (Foroudi ou ing., 2019). With this line of thinking, environmentally friendly associations ought to change present college student connections and also the precise product information plus technologies enhancement because successful DIENST FÜR KURZNACHRICHTEN toward consumers' (prospective students) in addition to varied stakeholders' information shipping and delivery to improve environmentally friendly brand name picture and even standing particularly bodies. Quite simply, college student (customer)-university (organisation) aide or even co-creations included students' aide in the direction of college or university photo, brand name, together with status (Foroudi ain 's., 2019; Ind, Iglesias and Schultz, 2013).

Good international increase associated with social media marketing utilization toward durabil-

ity plus eco-friendly advertising and marketing, Minton, Shelter, Orth, Betty plus Kahle (2012) emphasised typically the essentiality associated with social websites inside knowing durability subsequent person characteristics (interactivity, social networking, in addition to social correlations). Up to now, sociable conversation generally went through extreme changes (internally or even externally) within just organizations making use of electronic press systems (Facebook, WhatsApp, Tweets, and even YouTube) (Scholtz, Hamburger and Zita, 2016). Therefore, diverse organizations (higher schooling institutions), particularly eco friendly schools, emphasised electronic digital programs with regard to connection, promoting, marketing, together with company administration because ecological conversation methods along with particular advantages (high velocity plus inexpensive, papers utilization, in addition to transportation). With this abnormal vein, social networking denoted a competent marketing and advertising technique affecting individual behaviour and even behaviors (Scholtz tout autant que ing., 2016).

THEORETICAL FRAMEWORK

Connelly de surcroît ing. (2011) suggested pertinent marketing and advertising durability review ideas (similar to the analysis context). Next research setting up plus base depending on earlier research ideas, whistling plus social networking ideas had been bundled to be a guide to check into typically the USM environmentally friendly brand name problem for any tone knowledge of and additional decoration upon school involvement within eco friendly advertising business implementations (Connelly ou 's., 2011). The main element determinant main the particular whistling principle intended a good organization (university) taking or perhaps moving impulses, limitations, or even information (sustainability-oriented information) with various approaches to connect important capabilities, principles, or even goals in order to clients in addition to stakeholders (investors, buyers, plus students) or perhaps some other companies needing this kind of expertise (Connelly ain approach., 2011).

Just like the previously mentioned idea, the particular social media opposite number intended a helpful assumptive point of view where efficiency final results were basically depending on online social network projects within data transactions (sustainable know-how and even implementations) together with positive aspects (organisational romantic relationships between each other or even organisation-individual rapport) (Connelly ainsiq ue 's., 2011). Typically the viewpoint chief view shown an important tactic within the online social networking hypothesis to get person plus group facts shipping toward conceptual or perhaps behavioral use (Liu, Sidhu, Beacom as well as

Valido, 2017). Famously, viewpoint boss contracts gained value having details in addition to conversation technologies progress (computer-assisted relationship, the online world, and even social media marketing networks) (Liu tout autant que way., 2017). The research style down below had been advised using the use together with forecasts associated with both equally above mentioned hypotheses the following:

METHODOLOGY

The study technique has been used to deal with the research queries. Particularly, an overall total associated with 391 studies were dispersed in order to USM worldwide college students along with calculated sample subsequent 3 surveys takers requirements: (a) USM global college students, (b) authorized within USM, (c) undergrad plus post-graduate learners (Y. Shi et. al 2020). Trade pupils plus alumni had been ignored good previously mentioned requirements. In addition, the particular snowball testing method has been used to find typically the participants through previous surveys takers connections. All of the participants were designated along with specific avenue with regard to privacy to cope with the particular review concerns without having anxiety about reasoning.

The particular set of questions has been ready in addition to allocated within British next respondents' intercontinental history. The particular participants (selected personally and even via e-mail together with interpersonal media) have been supplied with imprinted or even digital (Google Form) study duplicates to become properly finished (Li ainsi que ing., 2020). Concerning the face-to-face set of questions, the research information were collected within highly-populated grounds places (student dormitories, spiel admission, plus canteens). In addition, the particular participants were briefed around the research goal plus review reaction period (10 in order to fifteen minutes) in addition to privacy with regard to educational factors (Tartari ou 's., 2020). Particularly, the study integrity has been given the green light by typically the USM Human being Study Integrity Panel (USM/JEPeM19090524).

FINDINGS

Contrary views had been acquired among the list of respondents' solutions after the 391 USM intercontinental university student studies. For instance, nearly all participants (n=178) intended lack of knowledge or even lack of understanding of the particular USM brand name durability whilst additional brethren (n=160) conceded over the positivity plus possible of this college com-

pany. Endure, thirty-two participants mentioned that will USM manufacturer durability was in an ideal stage. Surveys takers 381 said the following: "I believe this [USM] can characterize that [sustainable college brand] perfectly. " Basically, typically the declaration contradicted 7 participants whom opined that this current USM brand name durability showed inadequate plus "need a lot more promo in addition to socialisa- tion" next Surveys takers 376.

In line with the study, the majority of participants (n=240) recognized that will USM durability advertising guidelines possibly extra benefit in order to institutional brand name durability. Therefore, marketing and advertising demonstrated important for lasting university or college manufacturers. Surveys takers 390 mentioned the following: "indeed marketability is the foremost, or even it isn't really incorrect easily the just method to advertise their video likes a self-sufficient university or college (Guobin Chen et. al 2020). However, an even more incorporated online marketing strategy with the bridal of most stakeholders is certainly ideal. " Contrarily, a few participants (n=135) had been hazy regarding advertising characters for the purpose of lasting college or university company whilst couple of (n=15) compared the particular essentiality associated with advertising and marketing to get a lasting school manufacturer.

Concerning environmentally friendly higher education brand name promoting, a lot of participants (n=103) sug- gested that will USM create a comprehension involving eco friendly college or university brand name advertising amongst collage workers plus learners. For instance , Surveys takers fish hunter 360 recommended USM "to become more energetic and even connect a lot more throughout Language. " The actual, 65 participants advised USM to use social websites for the reason that marketing and advertising techniques for a new environmentally friendly institution company. For instance , Surveys takers 324 mentioned of which "USM ought to concentrate read more about social internet marketing to be able to increase a lot more [of their own ecological higher educatoin institutions brand]". In the same way, Surveys takers 346 pointed out that will USM should certainly "post read more about [sustainability] social networking. " Perhaps surprisingly, 43 participants presented the important part associated with learner wedding within marketing and advertising USM manufacturer durability simply by hiring foreign college students because ambassadors. For instance, Surveys takers 326 mentioned that will USM need to "engage a lot more individual- uals together with coach learners about how exactly [they can] take part in this [promoting typically the self-sufficient school brand]. "

Within handling just how USM can improve eco friendly college stamping, many participants (n=116) conceded of which USM can put into practice even more advertising personalization tech-

niques, like elevated USM-student aide via exercising upon university or college brand name durability advertising. Surveys takers 390 pointed out that will “training should emphasis to develop many personal (students, educators, plus staff) to produce their selves because ‘sustainability company ambassadors with respect to USM’.” Some other marketing and advertising technique tendencies have been associated with a lot more USM brand name durability things to do plus implementations about grounds.

DISCUSSION

Up to now, numerous educational institutions globally using the lasting college idea experienced numerous difficulties. For instance, numerous self-proclaimed environmentally friendly organizations were not really properly recognized. The research results exhibited that many participants (USM worldwide students) had inadequate understanding of lasting organizations, particularly relating to the USM brand name. The particular shortage might be related to not enough durability advertising methods. Likewise, Mohamad Saleh, Kassim, Tukur, Syed Mukhiar plus Balaraman (2021) exposed that will USM brand name identification (as the eco friendly university) has been negatively associated with worldwide students’ purpose to choose USM like a research location. Therefore, environmentally friendly establishments similar to USM required to concentrate on in your area plus internationally placement the ‘sustainable university or college brand’ along with focused advertising efforts. For instance , good [sustainable] in addition to eco-friendly company placement via advertising can stimulate a lot more consciousness one of the focus on populace [international students] and even effect particular choices (Chin, Mohd Lawi, Sulaiman, Mas’od, Muharam and Huam, 2019).

The analysis results true the particular essentiality associated with TEXT MESSAGE plus related actions to enhance typically the USM brand name picture together with status like a lasting college or university (Foroudi ainsi que ing., 2019). For instance, the particular college administration can stress TEXT plus appropriate procedures. Since the phrase ‘sustainability’ by yourself demonstrated too little to have a company (Perrault and Clark Simon, 2017), an alternative strategy has been necessary for suitable ecological brand name marketing and advertising methods (Gruborand as well as Milovanov, 2017). With this problematic vein, tertiary corporations may set up book advertising and marketing groups together with specific marketing and advertising goals with regard to strategized promoting tries in the direction of a new self-sufficient school manufacturer regarding wider target audience protection by means of advertisements (social media).

Particularly, effective SMS-student role-social press system integrations corresponded in order to previous functions associated with books (Foroudi ainsi que ing., 2019; Indou's., 2013). Subsequent respondents' suggestions, USM necessary to reveal proactivity plus participation via lasting college brand name advertising upon electronic mass media. For instance, several social networking systems (Facebook, Youtube . com, plus Instagram) had been accessible with assorted features in addition to targeted populace intended for durability advertising (Khan, Wang, Ehsan, Nurunnabi and Hashmi, 2019). In addition , improved social media marketing wedding possibly affected concentrate on human population choices (Pop, Săplăcan as well as Altbier, 2020) upon university or college choice. Regarding this, colleges required to recognize which usually social networking was considered suitable because environmentally friendly university or college company marketing and advertising systems in nearby plus worldwide amounts. Effective advertising and marketing by means of social networking in comparison to standard conversation equivalent (Motameni and Nordstrom, 2014) might socially help the particular USM manufacturer picture and even durability, particularly including potential global college students.

The research participants furthermore emphasized the particular essentiality regarding USM proactiveness to get improved recognition together with understanding about eco friendly college or university manufacturers amongst workers plus learners. Regardless of the common focus on marketing and advertising techniques in addition to goals of which mainly encompassed exterior areas, worldwide pupils needed a lot more attention and even wedding concerning ecological school brand names. With this problematic vein, USM had to make sure higher understanding plus participation between global college students together with workers pertaining to large institutional dedication plus strong promoting strategies. For instance, college or university someone plus ambassadors can provide familiarity with USM brand name durability inside college student sectors. General, exterior durability marketing techniques via tertiary companies must be incorporated using inner durability advertising with regard to increased school local community proposal (Selby, Smith and Kagawa, 2009).

A few participants furthermore pointed out the significance of USM worker in addition to pupil coaching in durability problems to become competent USM ambassadors' subsequent earlier research. For instance , Legislation, Hillside plus Hau (2015) uncovered that will personnel coaching upon environment programs possibly afflicted changes within ecological information, behaviour, and even behaviors. As a result, tertiary organizations like USM necessary to create extensive efficient teaching programs regarding learners together with workers instead of periodic occasions

(Earth Day). Sufficient staff plus college student education may set up a strong sustainability-based tradition within just inner areas for any highly-sustainable college brand name.

CONCLUSION

This particular study emphasized TEXT MESSAGE among the essential methods necessary for standard organizations looking for the lasting college brand name or even founded equivalent (USM). Student plus social networking system utilization allowed TEXT MESSAGE to aid USM like a lasting college via company picture, status, in addition to income improvement. This particular study extended current functions associated with books simply by reciprocating previous academic suggestions in order to incorporate whistling and even social networking ideas (Connelly ainsi que ing., 2011) plus 2 SMSs following a previously mentioned assumptive forecasts to focus on USM like an environ- mentally friendly university or college together with consequently enhance (locally plus globally) the in addition to status, particularly amongst worldwide college students and even stakeholders subsequent Mohamad Saleh ainsi que 's. (2021).

That analysis emphasised the particular interpersonal durability dimensions making use of TEXT (university learners because viewpoint frontrunners plus social networking network) in the direction of USM manufacturer picture enhancement like a lasting university or college, long term analysis might stress some other durability sizes (environmental or even economic), subjects covering social-environmental concentrate, advertising property, or even financial overall performance (sustainability-oriented marketing and advertising assets-economic overall performance correlation) (Chabowskiou approach., 2011), plus advertising and marketing methods (the part regarding non-academic workers, academics, plus actions within durability together with branding-oriented processes) next Mohamad Saleh ou way. (2021).

ACKNOWLEDGEMENTS

The particular experts lengthen the most appreciation in order to Universiti Sains Malaysia with regard to monetar- ily assisting this particular study underneath the Educational Study Give (1001. PCOMM. 8080006), the research participants (for energetic engagement), as well as the publishers for all your helpful comments.

REFERENCES

- A. A. M. P., Hamdi M., Bourouis S., Rastislav K. and Mohamed F. (2022) Evaluation of Neuro Images for the Diagnosis of Alzheimer's Disease Using Deep Learning Neural Network. *Front. Public Health* 10:834032. doi: 10.3389/fpubh.2022.834032
- A. A. Khan, M. Z. Wang, S. Ehsan, M. Nurunnabi, and M. H. Hashmi, *Sustainability* 11, 1–28 (2019).
- A. Gruborand and O. Milovanov, 2017. 25, 1039–1049 (2018).
- A.V. Boikova (2020). Forecasting possible bankruptcy enterprises: approaches and models. *Science, Education and Innovations in the context of modern problems*. 3 (1): 121
- B. L. Connelly, D. J. Ketchen, and S. F. Slater, *Journal of the Academy of Marketing Science* 39, 86–100 (2011).
- B. R. Chabowski, J. A. Mena, and T. L. Gonzalez-Padron, *Journal of the Academy of Marketing Science* 39, 55–70 (2011).
- B. Rapp, and N. Giesen (Springer International Publishing, 2016).
- B. Scholtz, C. Burger, and M. Zita, *A social media environmental awareness campaign to promote sustainable practices in educational environments*, edited by J. M. Gomez, M. Sonnenschein, U. Vogel, A. Winter,
- Bin Yuan, M. M. Kamruzzaman, Shaonan Shan, "Application of Motion Sensor Based on Neural Network in Basketball Technology and Physical Fitness Evaluation System", *Wireless Communications and Mobile Computing*, vol. 2021, Article ID 5562954, 11 pages, 2021. <https://doi.org/10.1155/2021/5562954>
- Chi, Z., Jiang, Z., Kamruzzaman, M.M. et al. Adaptive momentum-based optimization to train deep neural network for simulating the static stability of the composite structure. *Engineering with Computers* (2021). <https://doi.org/10.1007/s00366-021-01335-5>
- D. J. Li, W. T. Kao, V. Shieh, F. H. Chou, and H. A. Lo, *International Journal of Environmental Research and Public Health* 17, 1–13 (2020).
- D. Selby, P. Jones, and F. Kagawa, *Sustainability* 1, 537–555 (2009).
- E. K. Perrault and S. K. Clark, *Journal of Geoscience Education* 65, 194–202 (2017).
- E. Minton, C. Lee, U. Orth, C. H. Kim, and L. Kahle, *Journal of advertising* 41, 69–84 (2012).
- E. Taoketao, T. Feng, Y. Song, and Y. Nie, *Corporate Social Responsibility and Environmental Management*
- E. Tartari, K. Saris, N. Kenters, K. Marimuthu, A. Widmer, P. Collignon, V. C. C. Cheng, S. C. Wong,

- F. Popescu, T. Edu, I. Costel, Negricea, R. Zaharia, and R. M. Zaharia, *Amfiteatru Economic* 22, 411–431 (2020).
- G. Mazon, J. M. P. Ribeiro, C. R. M. D. Lima, B. C. G. Castro, and J. B. S. O. A. Guerra, *International Journal of Sustainability in Higher Education* 21, 1429–1450 (2020).
- Guobin Chen, Zhiyong Jiang, M.M. Kamruzzaman. (2020). Radar remote sensing image retrieval algorithm based on improved Sobel operator, *Journal of Visual Communication and Image Representation*, Volume 71, 2020, 102720, ISSN 1047-3203
<https://doi.org/10.1016/j.jvcir.2019.102720>
- Bharat S. Rawal, Poongodi M., Gunasekaran Manogaran, and Mounir Hamdi. 2021. Multi-Tier Stack of Block Chain with Proxy Re-Encryption Method Scheme on the Internet of Things Platform. *ACM Trans. Internet Technol.* 22, 2, Article 41 (May 2022), 20 pages. <https://doi.org/10.1145/3421508>
- Guobin Chen, Zhiyong Jiang, M.M. Kamruzzaman. (2020). Radar remote sensing image retrieval algorithm based on improved Sobel operator, *Journal of Visual Communication and Image Representation*, Volume 71, 2020, 102720, ISSN 1047-3203
<https://doi.org/10.1016/j.jvcir.2019.102720>
- H. Schroeder, 2015.
- I. Miorescu, G. C. Sabou, M. Bucur, and R. D. Zota, *Amfiteatru Economic* 22, 362–375 (2020).
- J. Jung, S. J. Kim, and K. H. Kim, *Journal of Business Research* 120, 294–301 (2020).
- L. P. Amaral, N. Martins, and J. B. Gouveia, *International Journal of Sustainability in Higher Education* 16, 155–172 (2015).
- M. Escribano, P. Gaspar, and F. J. Mesias, *Journal of Rural Studies* 75, 206–215 (2020).
- M. M. Law, P. Hills, and B. C. Hau, *Business Strategy and the Environment* 26, 84–97 (2015).
- M. Sady, A. žak, and K. Rzepka, *Adm. Sci* 9, 1–20 (2019).
- M. Saleh, M. S. Kassim, N. Tukur, N. A. S. Mukhiar, S. N. Balaraman, and R. A, *Media Watch* 12, 127–148 (2021).
- MM Kamruzzaman, Bingxin Yan, Md Nazirul Islam Sarker, Omar Alruwaili, Min Wu, Ibrahim Alrashdi. (2022). Blockchain and Fog Computing in IoT-Driven Healthcare Services for Smart Cities. *Journal of Healthcare Engineering*, Volume 2022,
<https://doi.org/10.1155/2022/9957888>
- Muniyappan, A.; Sundarappan, B.; Manoharan, P.; Hamdi, M.; Raahemifar, K.; Bourouis, S.;

- Varadarajan, V. Stability and Numerical Solutions of Second Wave Mathematical Modeling on COVID-19 and Omicron Outbreak Strategy of Pandemic: Analytical and Error Analysis of Approximate Series Solutions by Using HPM. *Mathematics* 2022, 10, 343. <https://doi.org/10.3390/math10030343>
- N. Ind, O. Iglesias, and M. Schultz, *California Management Review* 55, 5–26 (2013).
- P. Foroudi, Q. Yu, S. Gupta, and M. M. Foroudi, *Technological Forecasting and Social Change* 138, 218–227 (2019).
- P. Fuchs, C. Raulino, D. Conceição, S. Neiva, W. S. Amorim, T. C. Soares, M. A. D. Lima, C. R. M. D. Lima, J. C. Soares, and J. B. S. O. A. Guerra, *International Journal of Sustainability in Higher Education* 21, 1477–1505 (2020).
- Poongodi, M., Hamdi, M., & Wang, H. (2022). Image and audio caps: automated captioning of background sounds and images using deep learning. *Multimedia Systems*, 1-9. <https://doi.org/10.1007/s00530-022-00902-0>
- Poongodi, M., Hamdi, M., Gao, J., & Rauf, H. T. (2021, December). A Novel Security Mechanism of 6G for IMD using Authentication and Key Agreement Scheme. In *2021 IEEE Globecom Workshops (GC Wkshps)* (pp. 1-6). IEEE., Spain, DOI: 10.1109/GCWkshps52748.2021.9715537
- Poongodi, M., Nguyen, T. N., Hamdi, M., & Cengiz, K. (2021). A Measurement Approach Using Smart-IoT Based Architecture for Detecting the COVID-19. *Neural Processing Letters*, 1-15. <https://doi.org/10.1007/s11063-021-10602-x>
- R. Dagiliūtė, G. Liobikienė, and A. Minelgaitė, *Journal of Cleaner Production* 181, 473–482 (2018).
- R. Motameni and R. Nordstrom, *Journal of Marketing Management* 2, 27–48 (2014).
- R. Pop, Z. Săplăcan, and M. Alt, 2020.
- Ramesh, T. R., Vijayaragavan, M., Poongodi, M., Hamdi, M., Wang, H., & Bourouis, S. (2022). Peer-to-peer trust management in intelligent transportation system: An Aumann's agreement theorem based approach. *ICT Express*. <https://doi.org/10.1016/j.icte.2022.02.004>
- S. Fissi, A. Romolini, E. Gori, and M. Contri, *Journal of Cleaner Production* 279, 123655–123655 (2021).
- S. Sterling, *The sustainable university: Challenge and response*, edited by S. Sterling, L. Maxey, and H. Luna (2013).

- T. Chin, N. H. M. Lawi, Z. Sulaiman, A. Mas'od, F. M. Muharam, and H. T. Huam, *Journal of Arts & Social Sciences* 3, 23–33 (2019).
- T. Gottlieb, P. A. Tambyah, E. Perencevich, B. Allegranzi, A. Dramowski, M. B. Edmond, and A. Voss, *PloS one* 15, 1–14 (2020).
- V. Kumar and A. Christodouloupoulou, 2014.
- V. Kumar, Z. Rahman, and A. Kazmi, *Global Business Review* 14, 601–625 (2013).
- W. Liu, A. Sidhu, A. M. Beacom, and T. W. Valente, 2017.
- X. Bian and L. Moutinho, *European Journal of Marketing* 45, 191–216 (2011).
- Xing Li, Junpei Zhong, M.M. Kamruzzaman, “Complicated robot activity recognition by quality-aware deep reinforcement learning”, *Future Generation Computer Systems*, Volume 117, 2021, Pages 480-485.
- Y. Kim and K. Oh, *Sustainability* 12, 1–16 (2020).
- Y. Shi, S. Wang, S. Zhou and M. M. Kamruzzaman. (2020). Study on Modeling Method of Forest Tree Image Recognition Based on CCD and Theodolite. *IEEE Access*, vol. 8, pp. 159067-159076, 2020, doi: 10.1109/ACCESS.2020.3018180
- Y. Shi, S. Wang, S. Zhou and M. M. Kamruzzaman. (2020). Study on Modeling Method of Forest Tree Image Recognition Based on CCD and Theodolite. *IEEE Access*, vol. 8, pp. 159067-159076, 2020, doi: 10.1109/ACCESS.2020.3018180
- Yuanjin Xu, Ming Wei, M.M. Kamruzzaman, Inter/intra-category discriminative features for aerial image classification: A quality-aware selection model, *Future Generation Computer Systems*, Volume 119, 2021, Pages 77-83, ISSN 0167-739X, <https://doi.org/10.1016/j.future.2020.11.015>.
- U.Sh. Yadav, Nasir Mammadov, & Ravindra Tripathi. (2022). Small Business (Handicraft Sector) of Azerbaijan and impact of Pandemic -19 on Traditional craft: Strategies for development of Handicraft Sector in Azerbaijan. *Bank and Policy*, 2(2), 111–145. <https://doi.org/10.5281/zenodo.6461554>