Impact of Digital Marketing on the Growth of E-Service Sales

J. Junaidi, Agung Budiatmo, Febrianty, Ihdina Agustina and E. Laxmi Lydia

Abstract--- Virtual advertising and promoting include a large impact on ecommerce business enterprises' increase. The speedy increase of clever phones and web deliver additional access in promoting and searching merchandise with comfort. Social e-trade: the utilization of social media, e-commerce generates immense revenue as a result of it facilitates to make your target market and the whole value. Modern-day advertising has been going via a radical modification. Speedy moving advertising tendencies supported the boom and innovation of the latest technologies additionally to movable conversation devices influencing the patron conduct significantly. Welldesigned advertising arranges with distinctive virtual advertising and promoting gear is the demand in the incorporated advertising communication arrange for this school-friendly setting. high-speed web property brings giant vary of younger crowd in social media indicating vender got to be a lot of targeted and focused in virtual advertising tools for effective and inexperienced targeting of the marketplace as nicely to attain different structure wishes. Up to date day advertising associated promoting has been probing an intensive trade. Speedy moving advertising traits primarily based whole on the rise and innovation of latest technology additionally to transportable spoken communication devices influencing the shopper conduct drastically. A properly designed promoting arrange with specific digital advertising instrumentation is involved in the integrated advertising verbal exchange arrange for this school pleasant setting, excessive speed net connectivity brings a large selection of young crowd in social media indicating vender got to be larger focused and targeted in virtual advertising and promoting instrumentation for effective and inexperienced targeted on of market additionally to realize different structure wishes.

Keywords--- E-commerce, Growth Strategy, Digital Marketing, Online Marketing, E-strategy.

I. INTRODUCTION

Digital advertising construct is unexpectedly rising as a brand new construct that's sharply adopted the planet over for promoting fulfillment. in today's time, social media channels that incorporate face e-book, twitter, Google, and alternative social media companies have effectively remodeled the attitudes and perceptions of shoppers and ultimately helped revolutionized several firms. This became dead through a measurable sensible sized network of consumers of shoppers with honest facts with time period comments of consumer reports. The virtual marketplace needs digital advertising and promoting methods. The medium region is likewise taking part in an important role at intervals the medical aid motion.

J. Junaidi, Universitas Lancang Kuning, Pekanbaru, Indonesia. E-mail: drjunaidi@yahoo.com

Agung Budiatmo, Universitas Diponegoro, Indonesia.

Febrianty, Politeknik Palcomtech, Indonesia.

Ihdina Agustina, Sekolah Tinggi Ilmu Ekonomi Eka Prasetya, Medan, Indonesia.

E. Laxmi Lydia, Professor, Vignan's Institute of Information Technology(A), Department of Computer Science and Engineering, Visakhapatnam, Andhra Pradesh, India. E-mail: elaxmi2002@yahoo.com

Current unleash of reliance medium jio with the free & unlimited web facilities has performed a revolutionary role. The choice outstanding teams like Airtel, Idea, Vodafone &bsnl are conveyance appealing web plans. Indian banks are providing larger shopper-friendly cash dealing offerings. Currently, Indian clients spending time beyond regulation on social media and web water sport. Thus the visibility of any product is a lot through a digital medium than typical advertising methods.

Virtual advertising and promoting techniques consist of content material promoting, advertising and promoting automation, advert phrases, program improvement, social media, e-mail advertising, and computing device style. the key player's role players associate degreed infrastructure carriers in the digitization of an economic system area unit authorities, banking device, shopping for the portal in Republic of India, web service suppliers and software service carriers. It's miles tons a lot of convenient for teams to behavior surveys on-line on the thanks to getting relevant facts from targeted firms and analyzing the results based on their responses. Potential shoppers will seek for critiques and pointers to create knowledgeable decisions regarding shopping for a product or the usage of the supplier. However, businesses will use the exercise to require action on relevant comments from customers in meeting their desires a lot of properly.

There square measure two reasons for constructing the thought of e-advertising around customer studies

1. This methodology forces marketers to undertake the customer's issue of read.

2. It forces managers to remember of all factors of their digital logo's interactions with the patron, from the layout of the product or services to the selling message, the sales and fulfillment methods, and therefore the aftersales client support effort.

Any business that aims for improvement is connected to five basic advertising Tiers:

- 1. Marketplace studies
- 2. Development of the merchandise
- 3. Distribution
- 4. Pricing
- 5. Promoting.

II. DIGITAL MARKETING INDUSTRY IN INDIA

The virtual advertising trade in Bharat is unfolded to just about all of the business enterprise sectors. Variety of the applications of e-marketing square measure searching and order trailing, on-line banking, worth structures and content management. The electricity of virtual advertising permits geology barriers to fade creating all purchasers and agencies on the world potential customers and suppliers. It's acknowledged for its capability to permit business to speak and form a dealing all over and anytime. Virtual advertising and promoting enterprise in India could be a booming profession these days. In an exceedingly country with a quick growth economy, it's anticipated to own a really high huge boom in virtual advertising and promoting the profession. The boom within the digital advertising

tendencies is creating a really huge impact on advertising and advertising. The massive image of virtual advertising trade in Bharat can't be complete if the short preview of the past digital advertising and promoting facts isn't created.

In 2011, the digital promoting info noticed that advertising and promoting via the cellular cell phone and medicines become 2 hundred decreases than that of the subsequent years. For the period of these twelve months, the net extremely value becomes \$2 billion. The rise was in an exceedingly geometric development as a result of it rose to \$6 billion in 2012.

The aggressive boom desires for bigger improvement within the career works and professionals square measure being delivered to the sphere. From 2013 to March 2015, the investment total boom becomes one.5 billion USD over the preceding years.

There was a wonderful increase up till this moment. the file by the global magazine of superior analysis basis noticed that summarized that Bharat is going to see the golden amount of the net space among 2013 to 2018 with fantastic increase opportunities and laic increase adoption for e-commerce, internet advertising, social media, search, online content material, and services bearing on digital advertising. total media, virtual and cell net ad payment in Bharat (2013-2019).

2.1 The Sources of Digital marketing as follows

A. The Social Media Marketing (SMM): Social media selling or smm is Associate in Nursing result of your sem efforts. It includes driving traffic for your sites or business through social websites like fb, instagram, twitter, pinterest, google+, linkedin, and lots of others. As we have a tendency to noted higher than, acceptable content material is shared and liked. Therefore produce and individualize content material for various social media platforms. Recall to be prolific and authentic; you would like to interact with users on a every day basis, at the smallest amount four to 5 instances each day. yoursmm efforts are often in particular Helpful for disapproval and driving financial gain.

B. The Digital Display Advertising: This all-over again could be a set of your sem efforts. you may use AN growth of show advertising and promoting formats to focus on capability audience - be it matter content, picture, banner, rich-media, interactive or video commercials. You'll be able to customize your message supported pursuits, content material subjects, or the position of the client within the buying cycle. But, notice that digital show advertising is fairly expensive. You would like professionals to drive sensible ROI on your business enterprise.

C. The Mobile Marketing: The internet web site, apps, and content material are being customized for cellular devices. the cellular user's area unit developing day by day and it's miles the only method of advertising and selling. Google, the most important program, has shifted its focus to the cell-first index, and each virtual corporation Asian nation has no various but to sit down up straight and take observe. records for us already show that seventy twenty years of all United States digital ad payment by means that of 2019 may well be for cellular selling. That is abundant but a year away, Associate in Nursing Indian entrepreneurs are absolutely-aware of the potential of advertising at once to a character consumer.



Fig 1: Mobile phones subscribes in India

Advertising and promoting land has genuinely explicit even for offline purchases, cardinal of shoppers, with pride owning a Smartphone, can communicate net medium to succeed in an alternative. this is often the strength of digital advertising and promoting those agencies and advertising consultants can be got to leverage within the destiny to remain within the reckoning.

D. Viral Marketing: Viral advertising could be a methodology whereby a distinctive content material spreads exponentially on-line, thanks to the fact the content material is likeable, shared and favored vastly. That's a exceptional manner to whole and power traffic in your web site. The content material will take any layout; all you would like is to be inventive.

E. Email Marketing: Whilst you ship a industrial message through email correspondence to an inventory of ability shoppers, the approach is cited as email advertising.



Fig. 2: Online marketing

With a good e mail advertising code program, you'll be able to maintain email lists that area unit uninterested supported many factors, in conjunction with clients" likes and dislikes, and outlay behavior. bear in mind to ship individualized emails; this permits to broaden think about. But, word that e mail advertising may be taken into thought as spamming and there area unit laws con thereto in an exceedingly few international locations.

2.2 How the businesses are also benefited with on-line promoting -various strategic issues

1. The e-marketing designing method: the mix of e-advertising consists of distinctive targets, methods and Activities. It will be a streamlining procedure or reinventing system. In reinventing manner, the prevailing one is scrapped and A new one is made from scratch with a contemporary look. It involves separate e-marketing set up. Set the targets that Integrate e-advertising and promoting communications with conventional communications.

2. Organizing and resourcing for e-marketing: as a result of the importance of on-line channels increase, the structure of theAdvertising agency and duties may need to exchange to maximize the opportunities obtainable through newMedia. For this whether or not or to not alternate the structure of the advertising leader or now not, ought to be determined initially. Once it the New responsibilities for e-marketing ought to be diagnosed. Some way to extend e-advertising distinctive capabilities inside the Advertising and promoting group? Does the organization have the info advertising and analytical talents to help e-CRM and email Marketing? that e-marketing sports should be outsourced?

3. Process the net price proposition: to reap improved shopper utilization of online channels (web, email,Wireless), an awesome, distinctive proposition have to be compelled to be advanced for those on-line channels and it has to be compelled to be actually Communicated online and offline. the thanks to varying the weather of the advertising and promoting combine online?

4. E-emblem value: how does the worldwide web contribute to and impact brands? Some way to create larger the symbol online? Have to be compelled to Brand variations are used? However effective is that the emotional affiliation of a web emblem? However, is that the internet logo Experience perceived via customers? However, is on line carrier transport perceived by means that of clients?

5. Inserting the e-communications mix: process the share of online spends on exceptional components of the Communications combine. One has to discover the proportion of communications worth vary allotted to E-communications i.e. on line Spend package on promoting, spam and pr.

6. Email advertising integration: it is the blending of various styles of advertising email correspondence, i.e. rented list, house listing blasts, Provider e-mails and e-newsletters with typical communications, i.e. spam, advertising, and then forth to achieve Most response. Initial industrial enterprise needs to decide bit or contact strategy process minimum and most form of Touches in line with a patron during a length?

7. E-CRM: it's associated with digital-patron relationship management. exploitation online channels to make and deepen Relationships with customers are named e-CRM .key issues related to e-CRM is to manage patron statistics and Identifying the techniques via that centered on and personalizing messages for online shoppers is dead.

8. E-advertising automation: e-advertising automation is growing personalized advertising messages brought using internetAnd email correspondence in response to shopper occasions and behaviors. for this enterprise want to become aware of: the thanks to supporting the sales Manner and dating-building through automatic email speak supported net-based completely occasion triggers? a way to construct Associated-merchandise personalization into world wide web site online? The thanks to mixing personalization generation into this Infrastructure?

International Journal of Psychosocial Rehabilitation, Vol. 24, Issue 01, 2020 ISSN: 1475-7192

III. CONCEPTUAL FRAMEWORK

The crucial issue for a startup is growing speedy. one in every of the boom approach is in virtual promoting strategy, notably for an on-line startup company. to analyze however digital promoting aid increases methodology in brodo, this takes a glance at can conduct via many ranges. the tiers taken on these studies as follows: examine the external element three analyze 7c's of shopper interface and analyze contemporary Frodo's digital advertising and promoting strategy. it's going to describe however brodo use digital advertising as increase strategy. this examines embrace advertising mix and it'll possibly be consciousness on the virtual neighborhood. and adding dimension system to judge however an extended method body liquidates digital promoting space. once finding out those factors, this abstract framework ought to discover the inspiration of reasons and remedy the matter of startup organization have; business enterprise increase strategy. Then this examine can deliver some development for his or her virtual promoting approach to seize quicker growth.



Fig. 3: Conceptual Framework

In this study, the brodo enterprise growth technique is in penetration. they will consciousness on how to grow market shares and profit among the short period. this approach is investment a number of the firm's gift resources and talents. in a growing marketplace, the retentive market proportion can lead to boom, and there could, besides, exist opportunities to growth. and also using the growing utilization of gift shoppers, on however brodo can decriminalize their existing shoppers.

IV. THE SEVEN DESIGN ELEMENTS OF CUSTOMER INTERFACE (7C'S)

When targeted customers attend the web site, they'll effortlessly act with the organization. To convey a welldesigned computing device, the managers have contests to healthy their strategic goals of the business with an interface that will convey focused customers into a profitable one. The goal of brodo, as a guys vogue complete that think about e-trade, is generally to inspire buying. Within the starting look once customers visit brodo web site is that users will look there. Brodo offers getting choices with boldness. **Context:** The context of the net page captures its aesthetics and helpful appearance-and-sense. based totally on their goal that inspires users to buy for, brodo may be a hybrid data processor that mixes every aesthetics and helpful dimensions in their data processor. Thus users cannot stray in their web content. at the identical time as brodo expand a totally simple step for the client to store, they provide Associate in Nursing aesthetic sense to users. on the aesthetics aspect, brodo is perceptibly visual, with appealing photos of merchandise photographed of their theme setting. the photograph of their banner within the web site on-line square measure displayed in a very vogue that suits their subject at that second, as Associate in Nursing example journey feels. Functionally, the net web site gift an in-depth description of with 1st rate photos from each angle of products. brodo square measure terribly issue the good thing about the navigation of their data processor so users will certainly do the order procedure.

Content: Content material is delineated as all virtual subjects consider an electronic computer. at the constant time as brodo targeted every aesthetics and sensible, they gift content material that aids their context. inbrodo web site they cognizance to hold selected data or so their product with text and image and additionally there square measure a video that designates the thanks to order in brodo web site. usually, the cluster produces content-based mostly whole on purchasers wished once they save on-line in brodo web site. they'll be mistreatment pull content material.

Community: Community is outlined as a group of complex suit engineered upon shared hobbies. brodo already is tuned in to more or less the importance of community for his or her emblem. inbrodo web site there square measure a phase that featured on their homepage concerning brodo gentlemen community. in this section, users will see pix of brodo customers WHO wear brodo merchandise. brodo purchasers WHO featured on brodo information processing system can engage with the brand. and it outcomes most brodo purchasers WHO see the section can do the identical element, capture their second once they use brodo merchandise.

Customization: Customization is outlined as a website's capability to manage itself to-or be modified, the byevery user. There are varieties of customization, trade through the web site and personalization. inbrodo currently, they're nonetheless the usage of trade via web content as a result of all of the customization is initiated and managed by the firm. But inside the long run, they need to conceive to apply personalization in their computing device to construct larger excessive engagement with their customers.

Communication: It refers to speak that unfolds among the net website and its customers. therearea unit 3 size of communication: broadcast, interactive, and hybrid. brodo area unit the employment of hybrid communication. brodo have e-newsletter check-in field of their data processor, thus users will position their e mail and find a distinctive remedy from brodo consisting of special provides just for subscribers. brodo collects all the e-mail info and sends email advertising each doubly weekly to their subscribers, and it mentioned as broadcast. brodo provides a live chat with customers in their website, thus clients will only chat with brodo customer support, and it referred to as interactive. Because of the employment of every broadcast and interactive, it called hybrid communication. brodo is aware of that it's important to perpetually keep attach with their customers, therefore the usage of hybrid voice communication is that the satisfactory want.

Connection: Connection is outlined as a result of the network of hyperlinks between the online web site and different websites-in alternative words, clickable hyperlinks that each take the traffic off a enterprise's computing device or that exist on totally different sites to hold guests to the company's sites. inbrodo's computer there are no connections to alternative websites, as a result of they are doing not provide AN associate program and contrariwise. However they are doing social media plug of their computer. they positioned social media icon, thus once customers click the icon, they'll directly visit brodo's Social media website beside, brodofb page, brodo's instagram account, and so on.

Commerce: Trade is outlined as transactional capability of a site-the sale of products, products, or carrier on the site-at the facet of looking carts, delivery, and value choices, checkout, and order-confirmation practicality. Therefore as for a site to own e-trade abilities, several capabilities have to be compelled to be gift. brodo have already got all the functions that essential for e-commerce, that embody registration, pushcart, safety, credit score card approval, shipping alternatives, value technique alternatives, order following. However it would be outstanding if brodo will optimize order following perform to become bigger actual time for person.

Customer Profile

Primarily based on survey, 50% brood's customers are at age 24 - 34 years and seventy fifth are worker. It describes that brood's shoppers at age 24 - 34 years are the most capability shopper.



Fig. 4: Respondant Age (Survey 2016)



Fig. 5: Respondant Occupation (Survey 2016)

For higher info regarding brodo's shoppers, this survey additionally asked regarding however they acknowledge brodo, from that channel, and that tool they use to urge admission to brodo's web site. The result shows that 46% respondents knew brodo from their buddies and idolized ones, 28% from social media, and 25% from advertizing in others web site. This answer can facilitate management to determine that channel have to be compelled to be optimized. And it will keep their advertising price by method of choosing the correct channel to sell.



Fig. 6: Respondent first digital channel when recognize (Survey 2016)

In recent times in virtual field, having cell data processor for e-commerce square measure terribly essential.groups of people square measure a lot of of their smartphone than computer|information processing system|machine} or computer. Several articles declared that web users currently square measure their time a lot of in smartphone doing browsing or maybe searching in e-commerce computer. thus this survey additionally asked more or less however brodo's shopper access the web site and that hobby they did from their tool.



Fig. 7: Deviced used to brood website (Survey 2016)

The five hundred respondents declared that they use their phonephone to browse merchandise in brodo's web site, currently not Consist of purchase hobby, but only half-hour did purchase hobby via their phone. brodo's purchasers square measure locating additional comfortable to try to to searching in electronic computer, well-tried that seventieth brodo's purchasers elect electronic computer for purchase activity.

V. CONCLUSION

Daily developing virtual market in Asian nation is an obtrusive that the conversion is taking region with a excessive pace. all reviews and surveys conducted round the world are displaying that the digital advertising can grow a lot of in returning years. Youngsters of Asian nation is incredibly a decent deal era friendly. Mobile devices ar foretold to achieve spherical three billion devices international. so as larger kith and kin use good telephones, pills and different cellular gadgets, the flexibility of cellular marketplace continues to develop.

I conclude that the Virtual advertising is developing with a speedy pace not solely in Asian nation but at some purpose of stage moreover. whilst all different enterprise are scuffling with a boom value of 5-10%, virtual advertising enterprise is booming high and already done increase fee of half-hour remaining year and anticipated increase for year 2016 is four-hundredth and also the most significant part is that boom charge is not aiming to be stagnant in returning years. As result of the web customers is increasing daily ecommerce business is additionally on a booming course. Corporations are shifting their advertising finances from typical advertising and selling to digital advertising techniques. analysis imply that the amount of shoppers World Health Organization store on line in Asian nation is all told probability to cross one hundred million by mistreatment the surrender 2017, and also the e-retail market is foretold to boom to sixty 5 within the year 2018. such figures are clean indication that the virtual advertising offerings can retain to relish high notch growth and changes. agencies in Asian nation have to be compelled to embrace the virtual modifications and adopt the trending Improvements to measure competitive and accommodate a huge large choice of web customers.

REFERENCES

- [1] Tunguz, Tomasz, 2015, a framework for increasing startup advertising and promoting effectiveness, can even fifth.http://tomtunguz.com/building-a-customer-acquisition-system/
- [2] Arens, william., Weigold, Michael., arens, christian., 2011, modern advertising and promoting & incorporated advertising and promoting communications, *NY: John Joseph McGraw hill*.
- [3] Greiner, larry., 1999, evolution and revolution as business develop, Harvard business enterprise assess.
- [4] Kindly, brad alan. 2004, strategic electronic advertising, u.s.a. of us: Thomson south-western.
- [5] Mahound, et.al., 2005, net advertising, the massive apple: Mcgraw-hill nickels, McHugh & McHugh, 2006, data business enterprise, seventh version. *huge apple: Mcgraw-hill*.
- [6] Reins, eric, 2012, the lean startups, new york: crown business enterprise. Sinai, Samantha. 2015, growth hacking: a deep investigate of online advertising and promoting for startups. School of the USC graduate school.
- [7] A. Hermawati, Suhermin, and R. P. Suci, "Importance performance analysis on expectancy and reality levels of tourists and employees of the micro, small & medium enterprises of tourism sector," *J. Adv. Res. Dyn. Control Syst.*, vol. 11, no. 8 Special Issue, pp. 2133–2149, 2019.
- [8] R. P. Suci, A. Hermawati, Suwarta, and D. Anggarani, "Performance maximization strategy of micro, small & medium enterprises through the implementation of quality of work life and job involvement," *J. Adv. Res. Dyn. Control Syst.*, vol. 11, no. 8 Special Issue, pp. 2933–2942, 2019.
- [9] Sutduean, J., Singsa, A., Sriyakul, T., &Jermsittiparsert, K. 2019. "Supply Chain Integration, Enterprise Resource Planning, and Organizational Performance: The Enterprise Resource Planning Implementation Approach." *Journal of Computational and Theoretical Nanoscience* 16 (7): 2975-2981.
- [10] Singsa, A., Sriyakul, T., Sutduean, J., &Jermsittiparsert, K. 2019. "Willingness of Supply Chain Employees to Support Disability Management at Workplace: A Case of Indonesian Supply Chain Companies." *Journal* of Computational and Theoretical Nanoscience 16 (7): 2982-2989.
- [11] Jiao, Y., Jermsittiparsert, K., Krasnopevtsev, A., Yousif, Q., &Salmani, M. 2019. "Interaction of Thermal Cycling and Electric Current on Reliability of Solder Joints in Different Solder Balls." *Materials Research Express* 6 (10): 106302.

- [12] Yu, D., Ebadi, A., Jermsittiparsert, K., Jabarullah, N., Vasiljeva, M., &Nojavan, S. 2019. "Risk-constrained Stochastic Optimization of a Concentrating Solar Power Plant." *IEEE Transactions on Sustainable Energy* (*In press*), DOI: 10.1109/TSTE.2019.2927735.
- [13] Jermsittiparsert, K., Sriyakul, T., Sutduean, J., &Singsa, A. 2019. "Determinants of Supply Chain Employees Safety Behaviours." *Journal of Computational and Theoretical Nanoscience* 16 (7): 2959-2966.
- [14] Sriyakul, T., Singsa, A., Sutduean, J., &Jermsittiparsert, K. 2019. "Effect of Cultural Traits, Leadership Styles and Commitment to Change on Supply Chain Operational Excellence." *Journal of Computational and Theoretical Nanoscience* 16 (7): 2967-2974.
- [15] Jermsittiparsert, K. &Chankoson, T. 2019. "Behavior of Tourism Industry under the Situation of Environmental Threats and Carbon Emission: Time Series Analysis from Thailand." *International Journal of Energy Economics and Policy* 9 (6): 366-372.
- [16] Romprasert, S. & Jermsittiparsert, K. 2019. "Energy Risk Management and Cost of Economic Production Biodiesel Project." *International Journal of Energy Economics and Policy* 9 (6): 349-357.
- [17] Cao, Y., Huang, L., Li. Y., Jermsittiparsert, K., Ahmadi-Nezamabad, H., &Nojavan, S. 2020. "Optimal Scheduling of Electric Vehicles Aggregator under Market Price Uncertainty Using Robust Optimization Technique." *International Journal of Electrical Power & Energy Systems* 117: 105628.
- [18] Kasayanond, A., Umam, R., &Jermsittiparsert, K. 2019. "Environmental Sustainability and its Growth in Malaysia by Elaborating the Green Economy and Environmental Efficiency." *International Journal of Energy Economics and Policy* 9 (5): 465-473.
- [19] Jermsittiparsert, K, Sriyakul, T., &Rodoonsong, S. 2013. "Power (lessness) of the State in the Globalization Era: Empirical Proposals on Determination of Domestic Paddy Price in Thailand." Asian Social Science 9 (17): 218-225.
- [20] Jermsittiparsert, K, Sriyakul, T., &Pamornmast, C. 2014. "Minimum Wage and Country's Economic Competitiveness: An Empirical Discourse Analysis." *The Social Sciences* 9 (4): 244-250.
- [21] Jermsittiparsert, K., Pamornmast, C., &Sriyakul, T. 2014. "An Empirical Discourse Analysis on Correlations between Exchange Rate and Industrial Product Export." *International Business Management* 8 (5): 295-300.
- [22] Jermsittiparsert, K., Sriyakul, T., Pamornmast, C., Rodboonsong, S., Boonprong, W., Sangperm, N., Pakvichai, V., Vipaporn, T., &Maneechote, K. 2016. "A Comparative Study of the Administration of Primary Education between the Provincial Administration Organisation and the Office of the Basic Education Commission in Thailand." *The Social Sciences* 11 (21): 5104-5110.
- [23] Jermsittiparsert, K., Trimek, J., &Vivatthanaporn, A. 2015. "Fear of Crime among People in Muang-Ake, Lak-Hok, Muang, Pathumthani." *The Social Sciences* 10 (1): 24-30.
- [24] Jermsittiparsert, K. &Akahat, N. 2016. "Fear of Crime among Students of Kalasin Rajabhat University." *Research Journal of Applied Sciences* 11 (2): 54-61.
- [25] Yu, D., Wang, Y., Liu, H., Jermsittiparsert, K., &Razmjooy, N. 2019. "System Identification of PEM Fuel Cells Using an Improved Elman Neural Network and a New Hybrid Optimization Algorithm." *Energy Reports* 5: 1365-1374.
- [26] Tian, M., Ebadi, A., Jermsittiparsert, K., Kadyrov, M., Ponomarev, A., Javanshir, N., &Nojavan, S. 2019. "Risk-Based Stochastic Scheduling of Energy Hub System in the Presence of Heating Network and Thermal Energy Management." *Applied Thermal Engineering* 159: 113825.
- [27] Yu, D., Wnag, J., Li, D., Jermsittiparsert, K., &Nojavan, S. 2019. "Risk-Averse Stochastic Operation of a Power System Integrated with Hydrogen Storage System and Wind Generation in the Presence of Demand Response Program." *International Journal of Hydrogen Energy (In press)*.
- [28] Jabarullah, N., Jermsittiparsert, K., Melnikov, P., Maseleno, A., Hosseinian, A., &Vessally, E. 2019. "Methods for the Direct Synthesis of Thioesters from Aldehydes: A Focus Review." *Journal of Sulfur Chemistry (In press).*