



Students learning Behaviour: Factors influencing Students learning Behavior

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Abstract

The purpose of the research is to identify the relevant aspects that will have a direct impact on students learning behaviour' perceptions of the most popular organized university. The advent of new retailing forms has become considerably more organized and different from traditional retailing forms. The hypothesis is that there is a positive relationship between students learning behaviour, which is a dependent component, and independent factors such as motivation, perception, learning, and attitude, which are independent factors. This paper was analyzed using a quantitative manner. A field survey of students learning behaviour was conducted in Erbil's various retail university. The data was collected using a random sampling procedure. A total of 150 questionnaires were issued by the researchers. Although 129 questionnaires were received, only 117 of them were valid. The items on the questionnaire were in a multiple-choice format. The highest value for the attitude factor in this study was .708, indicating that there is a strong relationship between attitude and students learning behaviour.

I. INTRODUCTION

The retail environment in Erbil, Kurdistan, a semi-autonomous region in northern Iraq managed by the Kurdistan Regional Government, has changed dramatically over the last decade (Sohail & Nabaz, 2019). The growth of various university forms (Sharma et al. 2022), such as hypermarkets and super markets, as well as non-store forms, such as direct selling by factory owned retail university, street vendors, e-tailing (Shareef et al. 2021), and television – (qusay Ebraheem & Ali, 2021) student, has been phenomenal. As a result of the emergence of new formats that are unique from traditional retailing formats, retailing activity has grown more organized. According to (Khan & Abdullah, 2019), organized retailing can be defined as any professionally managed university, including family-run businesses (Saadi, 2021), that has accounting transparency and standards (Sabir et al. 2019), as well as proper (Kareem, 2020) Microsoft Information System (Riyadh et al. 2020) usage (Saadi, 2021). It also has centralized quality control and a well-organized supply chain management (Muhammed & Mustafa, 2021). Local sourcing is possible for some parts (Awdel et al. 2020).

The noticeable change in the environment may have an impact (Mustafa & Muhammed, 2020) on the consumer's desire to learning (Ali & Yahiya, 2018; Sharma & Kumar, 2021; Othman et al. 2018; Manikandan et al. 2020; Cao et al. 2022 Mohammed et al. 2018; Fareed et al. 2021; Sivaram et al. 2020; Rashid et al. 2019; Abdulsamad et al. 2022; Omar et al. 2021). The orientation of student can be used to examine a student habits (Rahmani et al. 2019). Kurdish people are increasingly going student (Ibrahim, 2021) for fun and spending their free time at student centers (Darbandi, 2018).

II. LITERATURE REVIEW

According to (Hassan & Ahmed, 2020) students learning behaviour have been categorized into three categories as he interviewed several women students learning behaviour (Ahmed et al. 2021

). Dependent student can be understood as a student who depends on their children or parents because they don't have source of income (Sadq et al. 2020). It can also be understood that student has money (Sharma & Ismail,

2022), but depends on his friends or relatives on decision making in buying process (Othman et al. 2020).

Compulsive student is second category that can be understood as student does student after entering the store and want to leave the university which they can't control (Mohammed et al. 2022). Individualistic student is (HamaAliFaraj et al. 2017) third category which can be understood (Mohammed, 2019; Sabir et al. 2021; Qader et al. 2021; Gardi et al. 2021; Mohammed, 2017; Saleh & Jamil, 2021; Alyousuf et al. 2020; Al-Yousuf & Din, 2020; Kareem et al. 2022; Mohammad, 2021; Hamad, et al. 2021; Sultan et al. 2020; Hamad et al. 2021; Cao et al. 2021; Qasim & Alyousuf, 202; Mohammed & Ahmed, 2018; M Aziz, 2016; Prakash et al. 2020; Sharma et al. 2020; Gowsic et al. 2019; Sharma et al. 2022) as a student who wants to do student individually where he/she enjoys freedom (Balaji et al. 2019) in choosing products (Jamal, 2021).

The extent of patronage concentration of university is other way to categorize students learning behaviour (Wu et al. 2022). Concentration of student and search are two parameters which were considered by (Ismeal et al. 2021). The first category of student was categorized as loyalty towards to store with more concentration and less search (Hamad et al. 2021). Second category of student was segregated as Convenience Oriented (Alyousuf & Din, 2020) with less concentration and less search (Karem et al. 2021). Third category was categorized as Recreational and Compulsive (Ahmed & Mohammed, 2018) with more concentration and more search. Fourth category was segregated as less concentration and more search (Hamza et al. 2021).

There was research conducted on internet students learning behaviour by (Abdalla Hamza, et al. 2021) and they concluded that income level of internet students learning behaviour would be more than non-students learning behaviour of Internet and exhibit inclination (Qasim et al. 2020) as Infomercial students learning behaviour. Vast research was performed on male students learning behaviour as well as female students learning behaviour by (Kangarluei et al. 2012) and he described different retail formats (Birdawod et al. 2018) as universities and categorized in six ways. Student behavior of student reshapes according to retail environment (Sultan, 2021). According to (Sharif & Azeez, 2021) a student performs student in a place which is away from his place of living while doing student which includes amusement and pleasure (rzgar Ahmed & Sharif, 2018). The transformation of several purposes will be fulfilled by students learning behaviour instead of different visits to retail university which will be time consuming, student

centers and malls will be convenient and students learning behaviour utilize their time with wide range of products according to (Dixit & Sharif, 2019). Kurdish environment needs (Khan & Zada, 2021; Sultan et al. 2020; Sadq et al. 2020; Khan et al. 2020; Mohammed, 2019; Sadq et al. 2020; Aziz et al. 2021; Khan, 2021; Qader et al. 2021; Sorguli et al. 2021; Khan, 2021; Qadir et al. 2021; Mohammed, 2021; Dixit & Sharif, 2020; Sharif, 2017; Fallahi et al. 2019; Rezaei et al. 2019; Khan & Zada, 2020; Mahmood et al. 2022) concentration of research which will unveil student trend. The research in this area is still proprietary in nature so that it is considered to be outside of public domain (Sultan, 2021).

Another research was made by (Qoitassi & Sharif, 2015) from presupposition of university towards suppliers and intermediaries. Countryside consumers are steered through bargaining with respect to various products (Abdalla Hamza, et al. 2021) and price (Nithyanantham et al. 2019). They also get steered of markets which are periodic in nature through promotion incentives (Hamad et al. 2021). Review made by (Mohammed et al. 2018) on students learning behaviour (Abdalla Hamza, et al. 2021). They found six motivations on behavior of student as they chose adults for their study as per students learning behaviour" (Aziz et al. 2021) entanglement with student which are choice optimizing, negotiation (Mohammed et al. 2018), economic role enactment, sensory stimulation, affiliation, influencing and economic role enactment (Cao et al. 2022).

Different psychosocial needs which are social (Majeed et al. 2021) and personal motivate students learning behaviour as per (Awasthi & Sharma, (2020)). Customer value is viewed as assessment of benefits of product features, consequences of usage and perception of customers" (Sadq et al. 2020) preferences which allows customers to reach their aspired goal as per (Sharma et al. 2019

). According to (Awasthi et al. 2019) the strong driver to learn in an organization is experience. A customer who is learnt about the company (Yaba et al. 2021), values and products can give better publicity into to the market through word of mouth (Darbandi, 2017). According the definition of (Ali & Ebraheem, 2021), attitude is continuous organization of processes which are emotional (Sohail & Dhuha, 2020), cognitive (Khan et al. 2019), perceptual and motivational towards to issues related to environment (Sadq et al. 2021).

Research hypothesis:

H1: There is a positive association between motivation and students learning behaviour.

H2: There is a positive association between perception and students learning behaviour.

H3: There is a positive association between learning and students learning behaviour.

H4: There is a positive association between attitudes and students learning behaviour.

III. RESEARCH METHODOLOGY

The aim of this study is to investigate the factors influencing students learning behaviour in Erbil. A quantitative research method was used to analyze the current study. A random sampling method was used to gather data. The researchers distribute 150 questionnaires. 129 questionnaires were received but only 117 questionnaires were valid. The questionnaire was in multiple choice format questions. The respondents were asking to rate each question according to five point likert, ranging from 1=strongly disagree, 2= disagree, 3= neutral, 4= agree and 5= strongly agree.

Data Analysis

Table (1) shows the reliability statics analysis. The researchers used four independent factors (motivation, perception, learning and attitudes) on the other hand, one dependent factor (students learning behaviour). In terms of

motivation as independent factor, the Cronbach's Alpha =.784 for 8 items, since (.784<.6) therefore 8 motivation questions were reliable. In terms of perception as independent factor, the Cronbach's Alpha =.854 for 8 items, since (.854<.6) therefore 8 perception questions were reliable. In terms of learning as independent factor, the Cronbach's Alpha =.946 for 7 items, since (.946<.6) therefore 7 learning questions were reliable. In terms of attitudes as independent factor, the Cronbach's Alpha =.926 for 7 items, since (.926<.6) therefore 7 attitudes questions were reliable, and the reliability test for students learning behaviour as dependent factor, the Cronbach's Alpha =.857 for 11 items, since (.857<.6) therefore, 11 students learning behaviour questions were reliable.

Table 1: Reliability Statistics

Factors	Cronbach's Alpha	N of Items
Motivation	.784	8
Perception	.854	8
Learning	.946	7
Attitudes	.926	7
Students learning behaviour	.857	11

Table 2: Correlations Analysis

Items	Pearson Correlation	Motivation	Perception	Learning	Attitude
Motivation	Pearson correlation	1	.839**	.872**	.647**
	Sig. (2-tailed)		.000	.000	.000
	N	117	117	117	117
Perception	Pearson Correlation	.839**	1	.861**	.696**
	Sig. (2-tailed)	.000		.000	.000
	N	117	117	117	117
Learning	Pearson Correlation	.872**	.861**	1	.693**
	Sig. (2-tailed)	.000	.000		.000
	N	117	117	117	117
Attitude	Pearson Correlation	.647**	.696**	.693**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	117	117	117	117
Students learning behaviour	Pearson Correlation	.595**	.685**	.632**	.921**
	Sig. (2-tailed)	.000	.000	.000	.000
	N	117	117	117	117

** . Correlation is significant at the 0.01 level (2-tailed).

Table (2) shows the correlation analysis. As mentioned previously four independent factors (motivation, perception, learning and attitudes) were analyzed and one dependent factor (students learning behaviour). As seen in the above table, the Pearson Correlation for motivation = .595** (Correlation is significant at the 0.01 level, 2-tailed), therefore there is a strong positive correlation between motivation and students learning behaviour. The Pearson Correlation for perception = .685** (Correlation is significant at the 0.01 level, 2-tailed), therefore there is a

strong positive correlation between perception and students learning behaviour. The Pearson Correlation for learning = .632** (Correlation is significant at the 0.01 level, 2-tailed), therefore there is a strong positive correlation between learning and students learning behaviour and the Pearson Correlation for attitudes = .921** (Correlation is significant at the 0.01 level, 2-tailed), therefore there is a strong positive correlation between attitudes and students learning behaviour.

Table 3: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.926 ^a	.858	.853	.28625
a. Predictors: (Constant), Attitude, Motivation, Perception, Learning				

Table (3), shows the value of R square = .858, which indicates that 86% of the variables have been explained.

Table 4: ANOVA

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	55.574	4	13.893	169.553	.000 ^b
	Residual	9.177	112	.082		
	Total	64.751	116			

- a. Dependent Variable: Students learning behaviour
- b. Predictors: (Constant), Attitude, Motivation, Perception, Learning

Table (4) shows the value of F for four independent factors and a dependent factor is 169.553 > 1 which indicates there is a significant association between four independent factors and dependent factor.

Table 5: Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.345	.179		1.929	.056
	Motivation	-.066	.092	-.056	-.723	.471
	Perception	.216	.075	.222	2.878	.005
	Learning	-.131	.087	-.128	-1.507	.135
	Attitude	.708	.041	.891	17.378	.000

- a. Dependent Variable: Students learning behaviour

Table (5) shows multiple regression analysis. As seen the results of multiple regression analysis, the value B for motivation factor is $-.066$ ($-.066 > 0.01$) therefore first research hypothesis was rejected. The value B for perception factor is $.216$ ($.216 < 0.01$) therefore second research hypothesis was supported. The value B for learning factor is $-.131$ ($-.131 > 0.01$) therefore third research hypothesis was rejected. The value B for attitude factor is $.708$ ($.708 < 0.01$) therefore fourth research hypothesis was supported.

IV. CONCLUSION

Interpretation of act of student in retailing is becoming tough day by day. Students learning behaviour acts of student patterns impact strategies on Retail Mix. The observations in this study help the university to understand the motivation, perception, learning and attitudes that affect students learning behaviour. As seen in the table (2), the highest value of the Pearson Correlation was for attitudes is $.921^{**}$ (Correlation is significant at the 0.01 level, 2-tailed), therefore there is a strong positive correlation between attitudes and students learning behaviour. The researchers used multiple regression analysis to analyze the current study. As seen in the table (5), the value B for motivation factor is $-.066$ ($-.066 > 0.01$) which indicates that there is no association between motivation with students learning behaviour; but the first research hypothesis was rejected. The value B for perception factor is $.216$ ($.216 < 0.01$) which indicates that there is a weak association between perception and students learning behaviour, and the second research hypothesis was supported. The value B for learning factor is $-.131$ ($-.131 > 0.01$) which indicates that there is no association between learning and students learning behaviour, but the third research hypothesis was rejected (Khan & AAS, 2019; Ahmed & Hassan, 2019; Sohail & Dhuha, 2021; Khorsheed et al. 2020; Khan, 2021; Mohammed et al. 2020; Saleh & Jamil, 2017; Abdalla Hamza, et al. 2021; Jamil & Mawlud, 2021; Khan et al. 2022; Mohammed et al. 2018; Sharma et al. 2022; Harouache et al. 2021; Jamil et al. 2018; Ibrahim et al. 2020; Mardan & Ahmed, 2017). The value B for attitude factor is $.708$ ($.708 < 0.01$) which indicates that there is a strong association between attitudes and students learning behaviour, accordingly the fourth research hypothesis was supported.

REFERENCES

[1] Ali, M. S., & Yahiya, T. A. (2018, October). Performance Analysis of Native Ipv4/Ipv6 Networks Compared to 6to4 Tunnelling Mechanism. In *2018 International Conference*

on Advanced Science and Engineering (ICOASE) (pp. 250-255). IEEE.

- [2] Honarbakhsh, A., Tahmoures, M., Afzali, S. F., Khajehzadeh, M., & Ali, M. S. (2022). Remote sensing and relief data to predict soil saturated hydraulic conductivity in a calcareous watershed, Iran. *CATENA*, *212*, 106046.
- [3] Ali, M. S., & Ebraheem, N. Q. (2021). Ways to Increase the Efficiency of Steganographic Use of Fractal Image Compression Algorithm. *QALAAI ZANIST SCIENTIFIC JOURNAL*, *6*(4), 1013-1030.
- [4] qusay Ebraheem, N., & Ali, M. S. (2021). Features of Application of Data Compression Methods. *QALAAI ZANIST SCIENTIFIC JOURNAL*, *6*(3), 969-983.
- [5] Sharma, A., Miran, A., & Ahmed, Z. R. (2022). Correction to: The 3D Facemask Recognition: Minimization for Spreading COVID-19 and Enhance Security. In *ICT Analysis and Applications* (pp. C1-C1). Springer, Singapore.
- [6] Sharma, A., Miran, A., & Ahmed, Z. R. (2022). The 3D Facemask Recognition: Minimization for Spreading COVID-19 and Enhance Security. In *ICT Analysis and Applications* (pp. 619-637). Springer, Singapore.
- [7] Sadq, Z. M., Sabir, H. N., & Saeed, V. S. H. (2018). Analyzing the Amazon success strategies. *Journal of process management and new technologies*, *6*(4).
- [8] Shareef, A. J., Saeed, B. R., & Sabir, H. N. (2021). Legal Regulation of The Civil Liability of The Air Carrier for Damages to The Goods. *QALAAI ZANIST SCIENTIFIC JOURNAL*, *6*(2), 760-784.
- [9] Sabir, H. N., Sadq, Z. M., & Saeed, V. S. H. Electronic Commerce: Administrative and Legal Framework.
- [10] Awdel, Z. M., Odel, N. M., & Saadi, W. F. (2020). The rise of the globalization and its effect on the autonomy of state and political economy. *Journal of critical reviews*, *7*(6), 998-1000.
- [11] Saadi, W. F. (2021). The New Generation of American Isolationists. *Annals of the Romanian Society for Cell Biology*, 19033-190
- [12] Saadi, W. F. (2021). The islamic republic of Iran's hegemony in Iraq, the cause, effect, and consequences. *QALAAI ZANIST SCIENTIFIC JOURNAL*, *6*(3), 1-23.
- [13] Kareem, K. F. (2020). Methods and preventive measures for juveniles from committing a felony from an islamic perspective. *QALAAI ZANIST SCIENTIFIC JOURNAL*, *5*(4), 428-448.
- [14] Muhammed, H. K., & Mustafa, B. M. T. (2021). The Legal and Economic Aspects of a Free Zone Setting Up Possibility in Ibrahim Al-Khalil Area in The Kurdistan Region of Iraq. *QALAAI ZANIST SCIENTIFIC JOURNAL*, *6*(2), 785-823.
- [15] Mustafa, B. M. T., & Muhammed, H. K. (2020). Relations of Human Rights Documentations with Constitutional Regulation of Rights. *QALAAI ZANIST SCIENTIFIC JOURNAL*, *5*(3), 180-203.
- [16] Rahmani, A., Hamanajm, S. A., Allahqoli, L., & Fallahi, A. (2019). Factors affecting dental cleaning behaviour

- among pregnant women with gingivitis. *International journal of dental hygiene*, 17(3), 214-220.
- [17] Ibrahim, S. (2021). Critically evaluating the special international relationship between the UN Security Council and the International Criminal Court (ICC). *QALAAI ZANIST SCIENTIFIC JOURNAL*, 6(1), 902-919.
- [18] Sohail, I. K., & Nabaz, N. A. (2019). The influence of social media on student's academic performance: a case study of Lebanese French University. *Ринкова економіка: сучасна теорія і практика управління*, (18, вип. 1), 38-56.
- [19] Donia, M. B., Mach, M., O'Neill, T. A., & Brutus, S. (2022). Student satisfaction with use of an online peer feedback system. *Assessment & Evaluation in Higher Education*, 47(2), 269-283.
- [20] Khan, S. I. (2021). Impact of spirituality at workplace on organizational commitment in private banks of Nagpur, India. *Путеводитель предпринимателя*, 14(4), 184-189.
- [21] Alkhateeb, M. A., & Abdalla, R. A. (2021). Factors influencing student satisfaction towards using learning management system moodle. *International Journal of Information and Communication Technology Education (IJICTE)*, 17(1), 138-153.
- [22] Khan, S. I. (2021). Communal support, work attitude, stress and job outcome across gender. *Management and Entrepreneurship: Trends of Development*, 3(17), 18-26.
- [23] Long, S., DUANG-EK-ANONG, S., & VONGURAI, R. (2021). Determinants of business education on student satisfaction in higher education: A case study in Cambodia. *The Journal of Asian Finance, Economics and Business*, 8(3), 1405-1416.
- [24] Sohail, I. K., & Dhuha, S. I. A Study of Emotional Competence of Education, Telecommunication and Hospital Sector Employees in India. *Journal of Xi» an University of Architecture & Technology*, 2020, Vol. XII, Issue II, 5223-5233.
- [25] Riyadh, H. A., Alfaiza, S. A., Khan, S. I., & Sultan, A. A. (2020). The Ugly Behind the Beauty of Corporate social Responsibility: A General Conceptual Perspective. *Journal of Research on the Lepidoptera*, 51(1), 750-758.
- [26] Khan, S. I., & Zada, R. Factor Influencing Consumers on Beguiling Craze of Online Shopping: A Study of Attitude in Nagpur City of Maharashtra (India).
- [27] Darbandi, H. (2017). THE STATE OF SUSTAINABLE TOURISM IN ERBIL. *QALAAI ZANIST SCIENTIFIC JOURNAL*, 2(3), 293-316.
- [28] Darbandi, H. The ability of management in developing tourism destination performance in Iraqi Kurdistan.
- [29] Sultan, A. A., Fbk, H. A., & Hosam Alden, R. (2020). Challenges and opportunities for adopting innovation in Iraqi SMEs. *International Journal of Psychosocial Rehabilitation*, 24(6), 7449-7456.
- [30] Yaba, T. K., Ahmed, A. K., & Hamad, K. Q. (2021). COVID-19'S Impact on Brand, Campaigning and Marketing Creativity: A Social Marketing Theoretical Approach. *QALAAI ZANIST SCIENTIFIC JOURNAL*, 6(4), 944-954.
- [31] Singh, S., & Jasial, S. S. (2021). Moderating effect of perceived trust on service quality–student satisfaction relationship: evidence from Indian higher management education institutions. *Journal of Marketing for Higher Education*, 31(2), 280-304.
- [32] Mahmood, S. S., Hamad, S. A., Hamad, K. J., & Ahmed, A. K. (2022). The Conformable Derivative Is Used to Solve a Fractional Differential Equation Analytically. *QALAAI ZANIST JOURNAL*, 7(1), 1050-1063.
- [33] Hassan, M. I., & Ahmed, A. K. (2020). A Proposal System Design of Evaluating Employees Performance in Qaladze Bank, Kurdistan Region of Iraq. *Journal of University of Raparin*, 7(4), 470-486.
- [34] Ahmed, A. K., & Hassan, M. I. (2019). THE ROLE OF INTERNAL ENVIRONMENT FACTORS IN IMPROVING EMPLOYEE PERFORMANCE. *QalaaI Zanist Journal*, 4(4), 1071-1102.
- [35] Sadq, Z., Othman, B., & Mohammed, H. (2020). Attitudes of managers in the Iraqi Kurdistan region private banks towards the impact of knowledge management on organizational effectiveness. *Management Science Letters*, 10(8), 1835-1842.
- [36] Khorsheed, R. K., Abdulla, D. F., Othman, B. A., Mohammed, H. O., & Sadq, Z. M. (2020). The Role of Services Marketing Mix 7P's on Achieving Competitive Advantages (The Case of Paitaxt Technical Institute in Kurdistan Region of Iraq). *TEST Engineering and Management*, 83, 15947-15971.
- [37] Sadq, Z. M., Khorsheed, R. K., Mohammed, H. O., & Othman, B. (2020). The Effect of Administrative Leadership on Achieving Business Success Strategies (The Case of Lebanese French University). *International Journal of Advanced Science and Technology*, 29(2), 3095-3102.
- [38] Giantari, I. G. A. K., YASA, N. N. K., SUKAWATI, T. G. R., & SETINI, M. (2021). Student satisfaction and perceived value on word of mouth (WOM) during the COVID-19 pandemic: An empirical study in Indonesia. *The Journal of Asian Finance, Economics and Business*, 8(6), 1047-1056.
- [39] Kim, S., & Kim, D. J. (2021). Structural relationship of key factors for student satisfaction and achievement in asynchronous online learning. *Sustainability*, 13(12), 6734.
- [40] Sadq, Z. M., Mohammed, H. O., Othman, B., & Saeed, V. S. (2020). Attitudes of Managers in the Knowledge Private University towards the impact of Human Capital in Achieving Competitive Advantages. *TEST Engineering and Management*, 82, 393-401.
- [41] Mohammed, H. O. (2019). The effect of motivation on employee productivity (A case study private bank in Kurdistan regional government). *Restaurant Business journal*, 11(118), 119-136.
- [42] Othman, B., Harun, A., Sadq, Z. M., Rashid, W. N., Abdullah, K. M., Mohammed, H. O., & Faeq, D. K. (2020). Effects of Service Marketing Mix on Umrah Customer Satisfaction: Empirical Study on Umrah

- Traveling Industry in Malaysia. *TEST Engineering and Management*, 83, 22895-22909.
- [43] Mohammed, H. O., Aziz, A. I., Sadq, Z. M., & Othman, B. A. (2020). The Impact of Transformation Leadership on Employee's Effectiveness (The Case of Ministry of Higher Education and Scientific Research, Kurdistan Regional Government, Iraq). *International Journal of Multicultural and Multireligious Understanding*, 7(11), 201-217.
- [44] Ammigan, R., Dennis, J. L., & Jones, E. (2021). The Differential Impact of Learning Experiences on International Student Satisfaction and Institutional Recommendation. *Journal of International Students*, 11(2), 299-321.
- [45] Hettiarachchi, S., Damayanthi, B. W. R., Heenkenda, S., Dissanayake, D. M. S. L. B., Ranagalage, M., & Ananda, L. (2021). Student Satisfaction with Online Learning during the COVID-19 Pandemic: A Study at State Universities in Sri Lanka. *Sustainability*, 13(21), 11749.
- [46] Mohammed, H. O. (2019). Relationship between participatory decision making and job satisfaction: a case study of private sector organizations in kurdistan-lfu. *Russian Journal of Agricultural and Socio-Economic Sciences*, 90(6).
- [47] Sadq, Z. M., Ahmad, B. S., Faeq, D. K., & Muhammed, H. O. (2020). The Effect of Strategic Planning on Entrepreneurship Strategy Requirements (The Case of Private Hospitals in Iraqi Erbil City). *International Journal of Multicultural and Multireligious Understanding*, 7(10), 147-164.
- [48] Mohammed, H. O., Sadq, Z. M., Abdullah, N. N., & Arab, H. R. (2022). Role of Strategic Flexibility in Enhancing Innovation Performance From a Futuristic Perspective. *QALAAI ZANIST JOURNAL*, 7(1), 1064-1081.
- [49] Aziz, A. I., Mohammed, S. S., Muhammed, H. O., Sadq, Z. M., & Othman, B. A. (2021). The Gender-Biased Wording of Recruitment Advertisements in Iraq. *UKH Journal of Social Sciences*, 5(2), 25-33.
- [50] Majeed, H. L., Mohammed, H. O., & Qadir, B. M. (2021). The Role of Natural Gas in the Economic Diversity of the Kurdistan Region. *QALAAI ZANIST JOURNAL*, 6(3), 1065-1091.
- [51] Qadir, B. M., Mohammed, H. O., & Majeed, H. L. (2021). Evaluating the Petroleum Contracts of Kurdistan Region in the Surveying and Applying the Deloitte Data (A Comparative Review). *International Journal of Multicultural and Multireligious Understanding*, 8(7), 236-244.
- [52] Mohammed, H. O. (2021). The Role of Intellectual Capital on Competitive Advantage. *International Journal of Multicultural and Multireligious Understanding*, 8(7), 245-258.
- [53] Rodríguez-García, M. C., Gutiérrez-Puertas, L., Granados-Gómez, G., Aguilera-Manrique, G., & Márquez-Hernández, V. V. (2021). The connection of the clinical learning environment and supervision of nursing students with student satisfaction and future intention to work in clinical placement hospitals. *Journal of Clinical Nursing*, 30(7-8), 986-994.
- [54] Mohammed, H. O. (2017). *The effect of employee burnout on employee job satisfaction the case of Kurdistan telecommunication sector: Asiacell and Korek telecom* (Master's thesis, Sosyal Bilimler Enstitüsü).
- [55] Jamal, S. (2021). The impact of online learning on students: Evidence from Lebanese French University-Erbil. *International Journal of Research in Business and Social Science* (2147-4478), 10(3), 522-532.
- [56] Rashid, S. J. M. (2022). The Relationship Between Social Entrepreneurship, Corporate Social Responsibility and Organizational Performance in Social Economy Companies at Kurdistan Region of Iraq. *QALAAI ZANIST JOURNAL*, 7(1), 1019-1037.
- [57] Mohammad, S. (2021). Impact of Brand Loyalty on Customer Satisfaction (An Empirical Analysis of Clothing Brands). *Jamal, S. & Sultan, K.(2021). Impact of Brand Loyalty on Customer Satisfaction (An Empirical Analysis of Clothing Brands). Turkish Journal of Computer and Mathematics Education*, 12(10), 7085-7093.
- [58] Fatah, N. A., Hamad, H. A., & Qader, K. S. (2021). The Role of Internal Audit on Financial Performance Under IIA Standards: A Survey Study of Selected Iraqi Banks. *QALAAI ZANIST SCIENTIFIC JOURNAL*, 6(2), 1028-1048.
- [59] Ismeal, B., Mahmood Aziz, H., Sorguli, S., Qader, K., Sabir, B. Y., Abdalla Hamza, P., ... & Anwar, G. (2021). The Role of External Auditing in Reducing Creative Accounting Practices. *Sarhang and Qader, Khowanas and Sabir, Bawan Yassin and Abdalla Hamza, Pshdar and Gardi, Bayar and Anwar, Govand, The Role of External Auditing in Reducing Creative Accounting Practices (November 7, 2021).*
- [60] Qader, K. S., Ismeal, B. A., Aziz, H. M., Hamza, P. A., Sorguli, S., Sabir, B. Y., ... & Gardi, B. (2021). The Effect of Human Resources Management Skills on Accounting Information Quality in Kurdistan Public Sector. *Journal of Humanities and Education Development (JHED)*, 3(3), 131-143.
- [61] Aziz, H. M., Sorguli, S., Hamza, P. A., Sabir, B. Y., Qader, K. S., Ismeal, B. A., ... & Gardi, B. (2021). Factors affecting International Finance Corporation. *Journal of Humanities and Education Development (JHED)*, 3(3), 148-157.
- [62] Hamad, K. Q., Qader, K. S., & Sharif, R. J. M. (2021). Effectiveness And Adequacy Of Disclosure Provisions In Tehran Stock Exchange. *PalArch's Journal of Archaeology of Egypt/Egyptology*, 18(08), 2379-2388.
- [63] Sorguli, S., Hamza, P. A., Ismeal, B. A., Sabir, B. Y., Aziz, H. M., Qader, K. S., ... & Gardi, B. (2021). Adaption of E-Filing of Income Tax Returns in Kurdistan.
- [64] Abdalla Hamza, P., Sabir, B. Y., Qader, K., Mahmood Aziz, H., Ismeal, B., Sorguli, S., ... & Anwar, G. (2021). Global financial markets: Factors influencing the global financial markets. *International Journal of Advanced Studies of Scientific Research*, 7(6).
- [65] Sibai, M. T., Bay Jr, B., & Dela Rosa, R. (2021). Service Quality and Student Satisfaction Using ServQual Model: A

- Study of a Private Medical College in Saudi Arabia. *International Education Studies*, 14(6), 51-58.
- [66] Sabir, B. Y., Qader, K. S., Hamza, P. A., Ali, B., Ismeal, S. S., Aziz, H. M., ... & Anwar, G. (2021). Analysis of Accounting-Based Measures of Expected Returns: A Study of Private SME In Kurdistan.
- [67] Kareem, L. E., Hamad, H. A., Bayz, H. A., Fatah, N. A., Ali, D. J., Ahmed, Z. N., ... & Qader, K. S. (2021). Corporate Governance And Its Effect On Firm Performance In An Emerging Economy. *International Journal of Environmental, Sustainability, and Social Science*, 2(3), 281-291.
- [68] Qader, K. S., Hamad, H. A., Gardi, B., Abdalla, P., Hamza, D., & Anwar, G. (2021). The role of sophisticated accounting system in organizational planning.
- [69] Hamad, H. A., Qader, K. S., Gardi, B., Abdalla, P., Hamza, D., & Anwar, G. (2021). The essential variables to consider before investing in financial markets during Covid-19.
- [70] Cervera-Gasch, A., González-Chordá, V. M., Ortiz-Mallasen, V., Andreu-Pejo, L., Mena-Tudela, D., & Valero-Chilleron, M. J. (2022). Student satisfaction level, clinical learning environment, and tutor participation in primary care clinical placements: An observational study. *Nurse Education Today*, 108, 105156.
- [71] Winstone, N. E., Ajjawi, R., Dirkx, K., & Boud, D. (2021). Measuring what matters: the positioning of students in feedback processes within national student satisfaction surveys. *Studies in Higher Education*, 1-13.
- [72] Ho, I. M. K., Cheong, K. Y., & Weldon, A. (2021). Predicting student satisfaction of emergency remote learning in higher education during COVID-19 using machine learning techniques. *Plos one*, 16(4), e0249423.
- [73] Khan, S., & Abdullah, N. N. (2019). The impact of staff training and development on teachers' productivity. *Economics, Management and Sustainability*, 4(1), 37-45.
- [74] Khan, S., Sultan, A. A., & Alsamarai, S. (2019). Social media and its adverse effect on academic performance of students. *Bulletin of Social Informatics Theory and Application*, 3(1), 38-44.
- [75] Keržič, D., Alex, J. K., Pamela Balbontín Alvarado, R., Bezerra, D. D. S., Cheraghi, M., Dobrowolska, B., ... & Aristovnik, A. (2021). Academic student satisfaction and perceived performance in the e-learning environment during the COVID-19 pandemic: Evidence across ten countries. *Plos one*, 16(10), e0258807.
- [76] Giray, G. (2021). An assessment of student satisfaction with e-learning: An empirical study with computer and software engineering undergraduate students in Turkey under pandemic conditions. *Education and Information Technologies*, 26(6), 6651-6673.
- [77] Khan, S. I., & AAS, H. A. R. (2019). Academic Performance, Social Media Effects, and Learning of College Students: Evidence of Positive Influence in Erbil City. *Journal of Research on the Lepidoptera*, 50(4).
- [78] Sohail, I. K., & Dhuha, S. I. (2021). Study of outcome of Job rotation on performance by understanding the effect of multitasking and employee specialization on Job Rotation of employees from Manufacturing Industries. *Journal of Natural Remedies*, 21(10), 1.
- [79] Zeng, X., & Wang, T. (2021). College student satisfaction with online learning during COVID-19: A review and implications. *International Journal of Multidisciplinary Perspectives in Higher Education*, 6(1), 182-195.
- [80] Khan, S. I. (2021). Online classes amid the Covid-19 Pandemic: Parents Perspective. *European Journal of Molecular & Clinical Medicine*, 8(02), 2021.
- [81] Quispe-Prieto, S., Cavalcanti-Bandos, M. F., Caipa-Ramos, M., Paucar-Caceres, A., & Rojas-Jiménez, H. H. (2021). A systemic framework to evaluate student satisfaction in Latin American universities under the Covid-19 pandemic. *Systems*, 9(1), 15.
- [82] Müller, A., Bellhäuser, H., Konert, J., & Röpke, R. (2022). Effects of group formation on student satisfaction and performance: A field experiment. *Small Group Research*, 53(2), 244-273.
- [83] Khan, S. I., & Zada, R. S. E. (2021). A Study about Financial Planning and Tax Saving Options for Primary and Secondary School Teachers of Nagpur Region. *Elementary Education Online*, 20(1), 2497-2502.
- [84] Prifti, R. (2022). Self-efficacy and student satisfaction in the context of blended learning courses. *Open Learning: The Journal of Open, Distance and e-Learning*, 37(2), 111-125.
- [85] Riley, E., Capps, N., Ward, N., McCormack, L., & Staley, J. (2021). Maintaining Academic Performance and Student Satisfaction during the Remote Transition of a Nursing Obstetrics Course to Online Instruction. *Online Learning*, 25(1), 220-229.
- [86] Khan, S. I., Ismael, D. S., & Zada, A. R. (2020). Drivers of customer satisfaction for mobile service provider in Maharashtra (India). *The Journal of Research on the Lepidoptera*, 51(1), 708-720.
- [87] Hamza, P. A., Hamad, H. A., Qader, K. S., Gardi, B., & Anwar, G. (2021). Management of outsourcing and its relationship with hotels' performance: An empirical analysis of selected hotels in Erbil. *International Journal of Advanced Engineering Research and Science*, 8, 10.
- [88] Gardi, B., Hamza, P. A., Qader, K. S., Anwar, H., Hamad, D., & Anwar, G. (2021). Factors affecting the quality of financial statements on investment decision making.
- [89] Harouache, A., Chen, G. K., Sarpin, N. B., & Majeed, N. (2021). Importance of green supply chain management in Algerian construction industry towards sustainable development. *Journal of Contemporary Issues in Business and Government Vol*, 27(1).
- [90] Abdalla Hamza, P., Sabir, B. Y., Qader, K., Mahmood Aziz, H., Ismeal, B., Sorguli, S., ... & Anwar, G. (2021). Global financial markets: Factors influencing the global financial markets. *International Journal of Advanced Studies of Scientific Research*, 7(6).
- [91] Gantasala, V. P., Gantasala, S. B., Na, T., & Prasad, P. (2021). Quality of learning experience, student satisfaction and perceived overall experience in the COVID-19 context. *Journal of Applied Research in Higher Education*.

- [92] Abdalla Hamza, P., Sabir, B. Y., Qader, K., Mahmood Aziz, H., Ismeal, B., Sorguli, S., ... & Anwar, G. (2021). Global financial markets: Factors influencing the global financial markets. *International Journal of Advanced Studies of Scientific Research*, 7(6).
- [93] Gantasala, V. P., Gantasala, S. B., Na, T., & Prasad, P. (2021). Quality of learning experience, student satisfaction and perceived overall experience in the COVID-19 context. *Journal of Applied Research in Higher Education*.
- [94] Abdalla Hamza, P., Gardi, B., Hamad, H., & Anwar, G. (2021). Analysis the impact of Information technology on Efficient tax Management. *Bayar and Hamad, Hawkar and Anwar, Govand, Analysis the impact of Information technology on Efficient tax Management (December 6, 2021)*.
- [95] Hamad, H. A., Hamza, P. A., Gardi, B., Saeed, K., Qader, D., & Anwar, G. (2021). The influence of accounting software in minimizing business costs.
- [96] Kangarluei, S. J., Motavasel, M., & Sharifi, R. M. (2012). The Effect of Off-balance Sheet Financing on Profitability and Leverage Ratios. *Editorial Note Words from the Board of Editor 2 Profile of Authors Included in this Number 3 Information for Contributors 5*, 5(1), 85.
- [97] Sultan, K., Ahmed, R. R., Jafar, R., Murtaza, M. M., & Gardi, B. (2020). Corporate financial policy and its impact on sustainable capital structure: empirical evidence from textile firms of pakistan. *Humanities & Social Science Review*, 149-158.
- [98] Hamad, K. Q., Qader, K. S., & Sharif, R. J. M. (2021). Effectiveness And Adequacy Of Disclosure Provisions In Tehran Stock Exchange. *PalArch's Journal of Archaeology of Egypt/Egyptology*, 18(08), 2379-2388.
- [99] Sharif, R. J. M., & Azeez, T. Y. (2021). A Comparison Of Ifrs And Us Gaap With Potential Effects On Investment Analysis. *PalArch's Journal of Archaeology of Egypt/Egyptology*, 18(4), 6177-6187.
- [100] Dixit, P., & Sharif, R. J. M. (2019). Analysis of CSR Impact on Private Sector Secondary School: A study in North and South Delhi (India). *Social Development and Security*, 9(6).
- [101] rzgar Ahmed, R., & Sharif, R. J. M. (2018). The Effect of Tuition Fees on University Applications and Attendance: Evidence from the Kurdistan Region private Universities. *Qalaai Zanist Scientific Journal*, 3(4), 812-836.
- [102] Sultan, K. (2021). A Piece of Education on Comparative Performance Study of Islamic Banking system and Commercial Banking system in Pakistan. *Turkish Journal of Computer and Mathematics Education (TURCOMAT)*, 12(10), 7074-7084.
- [103] Sahinidis, A. G., & Tsaknis, P. A. (2021). Exploring the relationship of the big five personality traits with student satisfaction with synchronous online academic learning: The case of Covid-19-induced changes. In *Strategic innovative marketing and tourism in the Covid-19 era* (pp. 87-94). Springer, Cham.
- [104] Rofingatun, S., & Larasati, R. (2021). The effect of service quality and reputation on student satisfaction using service value as intervening variables. *The International Journal of Social Sciences World (TIJOSW)*, 3(01), 37-50.
- [105] Sultan, K. (2021). Human Capital as Competitive Advantage: Empirical Evidence from Entities of Pakistan. *Turkish Journal of Computer and Mathematics Education (TURCOMAT)*, 12(7), 2176-2184.
- [106] Dixit, P., & Sharif, R. J. M. (2020). Standard Taxation Gaps & Reforms: A Critical Review of Revenue Policies of Kurdistan Region of Iraq. *SRIWIJAYA INTERNATIONAL JOURNAL OF DYNAMIC ECONOMICS AND BUSINESS*, 3(4), 341-354.
- [107] Sharif, R. J. M. (2017). Motivational Factors that Influence Foreign Direct Investment in Kurdistan Region. *QALAAI ZANIST SCIENTIFIC JOURNAL*, 2(4), 312-325.
- [108] Qoitassi, K. M., & Sharif, R. J. M. (2015). The Usability of classroom Technologies in English Language Teaching and Learning (ELT & ELL). *ANGLISTICUM. Journal of the Association-Institute for English Language and American Studies*, 3(7), 46-59.
- [109] Fallahi, A., Jamil, D. I., Karimi, E. B., Baghi, V., & Gheshlagh, R. G. (2019). Prevalence of obstructive sleep apnea in patients with type 2 diabetes: A systematic review and meta-analysis. *Diabetes & Metabolic Syndrome: Clinical Research & Reviews*, 13(4), 2463-2468.
- [110] Rezaei, H., Jamil, D. I., Ebadi, A., & Gheshlagh, R. G. (2019). Psychometric properties of the persian version of the instrument for assessing cardiac patients' knowledge, attitude, and beliefs regarding heart attack. *International Cardiovascular Research Journal*, 13(2), 62-68.
- [111] Jamil, D. I., Saleh, D. M., & Rahim, A. G. (2018). Construction of New Standardized Attribute Control Chart based on defects per million opportunities. *QALAAI ZANIST SCIENTIFIC JOURNAL*, 3(3), 734-745.
- [112] Saleh, D. M., & Jamil, D. I. (2017). Construction Three Charts Based on Inter Quartile Range and Comparison of Efficiency with Three Charts Based on Range. *QALAAI ZANIST SCIENTIFIC JOURNAL*, 2(3), 317-329.
- [113] Jamil, D. I., & Mawlud, B. S. (2021). Gender in The Sustainable Development Goals in Kurdistan Region-Iraq. *QALAAI ZANIST SCIENTIFIC JOURNAL*, 6(4), 970-989.
- [114] Saleh, D. M., & Jamil, D. I. (2021). Construction X-Bar Chart for Quality Control Using of Robust (MAD) Estimator in Under Consideration Is Outlier with An Application. *QALAAI ZANIST SCIENTIFIC JOURNAL*, 6(3), 575-588.
- [115] Kadir, D. H., Saleh, D. M., & Jamil, D. I. Comparison between four Methods to Construction Number of Defectives Control Chart.
- [116] Birdawod, H. Q., Jamil, D. I., & Saleh, D. M. (2018). Comparison of Efficiency and Sensitivity between (Three Sigma, Six Sigma and Median Absolute Deviation) by using Xbar Control Chart. *QALAAI ZANIST SCIENTIFIC JOURNAL*, 3(2), 803-812.
- [117] Nithyanantham, V., Paulmony, R., & Hasan, S. R. (2019). Self-perspective of 21st century educators: a challenge in the globalised educational world. *International Journal of Educational Research Review*, 4(3), 325-333.

- [118] Qasim, A. J., Din, R., & Alyousuf, F. Q. A. (2020). Review on techniques and file formats of image compression. *Bulletin of Electrical Engineering and Informatics*, 9(2), 602-610.
- [119] Alyousuf, F. Q. A., Din, R., & Qasim, A. J. (2020). Analysis review on spatial and transform domain technique in digital steganography. *Bulletin of Electrical Engineering and Informatics*, 9(2), 573-581.
- [120] Al-Yousuf, F. Q. A., & Din, R. (2020). Review on secured data capabilities of cryptography, steganography, and watermarking domain. *Indonesian Journal of Electrical Engineering and Computer Science (IJECS)*, 17(2), 1053-1059.
- [121] Ahmed, F. Q. A., & Mohammed, A. S. (2018). Enhancing The Data Security In Cloud Computing By Using New Encryption Method. *Qalaai Zanist Scientific Journal*, 3(1), 1011-1021.
- [122] Mohammed, A. S., Ahmed, F. Q. A., & Ibrahim, B. F. (2018). Modification of load balancing method in networks with wimax technology. *QALAAI ZANIST SCIENTIFIC JOURNAL*, 3(2), 791-802.
- [123] Alyousuf, F. Q. A., & Din, R. (2020). Analysis review on feature-based and word-rule based techniques in text steganography. *Bulletin of Electrical Engineering and Informatics*, 9(2), 764-770.
- [124] Mardan, F. N., & Ahmed, F. Q. (2017). A Paper Survey On The Impact Of (It) On The Quality Of Financial Data (Case Study Of Municipalities And Tourism Ministry In Kurdistan Region–Iraq). *Qalaai Zanist Scientific Journal*, 2(2), 51-57.
- [125] Kareem, S. W., Alyousuf, F. Q. A., Ahmad, K., Hawezi, R., & Awla, H. Q. (2022). Structure Learning of Bayesian Network: A Review. *QALAAI ZANIST JOURNAL*, 7(1), 956-975.
- [126] Wu, Z. Z., Xu, Y. P., Cheng, Z. L., Sun, H. W., Papari, B., Sajadi, S. S., & Qasim, F. (2022). Optimal placement and sizing of the virtual power plant constrained to flexible-renewable energy proving in the smart distribution network. *Sustainable Energy Technologies and Assessments*, 49, 101688.
- [127] Cao, Y., Dhahad, H. A., Mansir, I. B., ABo-Khalil, A. G., Alamri, S., Rajhi, A. A., ... & Qasim, F. (2021). Development of a combined system based on a PEMFC and hydrogen storage under different conditions equipped with an ejector cooling system. *International Journal of Hydrogen Energy*.
- [128] Qasim, A. J., & Alyousuf, F. Q. A. (2021). History of Image Digital Formats Using in Information Technology. *QALAAI ZANIST SCIENTIFIC JOURNAL*, 6(2), 1098-1112.
- [129] Mohammed, A. S., & Ahmed, F. Q. (2018). Study of video traffic In telecommunication systems for the purpose of service quality. *QALAAI ZANIST SCIENTIFIC JOURNAL*, 3(3), 665-673.
- [130] M Aziz, M. (2016). Determine the pH. of Soil by Using Neural Network Based on Soil's Colour. *International Journal of Advanced Research in Computer science and Software Engineering*, 6(11), 51-54.
- [131] Ibrahim, B. F., Toycan, M., & Mawlood, H. A. (2020, January). A comprehensive survey on VANET broadcast protocols. In *2020 International Conference on Computation, Automation and Knowledge Management (ICCAKM)* (pp. 298-302). IEEE.
- [132] Prakash, M. V., Porkodi, V., Rajanarayanan, S., Khan, M., Ibrahim, B. F., & Sivaram, M. (2020, September). Improved Conservation of Energy in Fog IOT Services Using Machine Learning Model. In *2020 International Conference on Computing and Information Technology (ICCIIT-1441)* (pp. 1-4). IEEE.
- [133] Manikandan, V., Gowsic, K., Prince, T., Umamaheswari, R., Ibrahim, B. F., & Sampathkumar, A. (2020, September). DRCNN-IDS Approach for Intelligent Intrusion Detection System. In *2020 International Conference on Computing and Information Technology (ICCIIT-1441)* (pp. 1-4). IEEE.
- [134] Cao, Y., Dhahad, H. A., Togun, H., El-Shafay, A. S., Alamri, S., Rajhi, A. A., ... & Ibrahim, B. F. (2022). Development and transient performance analysis of a decentralized grid-connected smart energy system based on hybrid solar-geothermal resources; Techno-economic evaluation. *Sustainable Cities and Society*, 76, 103425.
- [135] Balaji, B. S., Rajkumar, R. S., & Ibrahim, B. F. (2019). Service profile based ontological system for selection and ranking of business process web services. *International Journal of Advanced Trends in Computer Science and Engineering*, 8, 18-22.
- [136] Mohammed, A. S., Ahmed, F. Q. A., & Ibrahim, B. F. (2018). Modification of load balancing method in networks with wimax technology. *QALAAI ZANIST SCIENTIFIC JOURNAL*, 3(2), 791-802.
- [137] Mohammed, A. S., Ahmed, F. Q. A., & Ibrahim, B. F. (2018). Modification of load balancing method in networks with wimax technology. *QALAAI ZANIST SCIENTIFIC JOURNAL*, 3(2), 791-802.
- [138] Cao, Y., Dhahad, H. A., Sharma, K., ABo-Khalil, A. G., El-Shafay, A. S., & Ibrahim, B. F. (2022). Comparative thermoeconomic and thermodynamic analyses and optimization of an innovative solar-driven trigeneration system with carbon dioxide and nitrous oxide working fluids. *Journal of Building Engineering*, 45, 103486.
- [139] Fareed, B., Toycan, M., & Mohammed, A. S. (2021). DTCR: delay time aware controlled rebroadcasting mechanism for intelligent transportation systems. *Soft Computing*, 25(18), 12537-12549.
- [140] Khan, M. N., Dhahad, H. A., Alamri, S., Anqi, A. E., Sharma, K., Mehrez, S., ... & Ibrahim, B. F. (2022). Air cooled lithium-ion battery with cylindrical cell in phase change material filled cavity of different shapes. *Journal of Energy Storage*, 50, 104573.
- [141] Sivaram, M., Rohini, R., Rajanarayanan, S., Maselena, A., Mohammed, A. S., Fareed Ibrahim, B., & Goel, P. M. (2020). Efficient coverage greedy packet stateless routing in wireless sensor networks. *Measurement and Control*, 53(7-8), 1116-1121.
- [142] HamaAliFaraj, K., Ibrahim, B. F., & Salih, A. A. (2017). Distance Varieties Wireless Signals Relations Connected

- Peer to Peer Computers. *QALAAI ZANIST SCIENTIFIC JOURNAL*, 2(2), 189-203.
- [143] Rashid, T. A., Hassan, M. K., Mohammadi, M., & Fraser, K. (2019). Improvement of variant adaptable LSTM trained with metaheuristic algorithms for healthcare analysis. In *advanced classification techniques for healthcare analysis* (pp. 111-131). IGI Global.
- [144] Sharma, A., Awasthi, Y., & Kumar, S. (2020, October). The Role of Blockchain, AI and IoT for Smart Road Traffic Management System. In *2020 IEEE India Council International Subsections Conference (INDISCON)* (pp. 289-296). IEEE.
- [145] Awasthi, Y., & Sharma, A. (2020). Contrasting of Various Algorithmic Techniques to Solve Knapsack 0-1 Problem. *JOIV: International Journal on Informatics Visualization*, 4(1), 16-21.
- [146] Gowsic, K., Manikandan, V., Sharma, A., Sivaram, M., & Porkodi, V. (2019). Design of a Hybrid Logic Based Adaboost Decision Tree Model for Identifying Web Attacks. *International Journal of Advanced Trends in Computer Science and Engineering*, 8(1.2), 52-58.
- [147] Sharma, A., Hussain, O., & Sharma, A. (2019). A Smarter Way to Improve Learning Outcome based on Computer Application. *International Journal of Innovative Research in Computer Science & Technology (IJIRCST)*, 7.
- [148] Sharma, A., & Ismail, Z. S. (2022). Weather Classification Model Performance: Using CNN, Keras-Tensor Flow. In *ITM Web of Conferences* (Vol. 42). EDP Sciences.
- [149] Sharma, A., Miran, A., & Ahmed, Z. R. (2022). The 3D Facemask Recognition: Minimization for Spreading COVID-19 and Enhance Security. In *ICT Analysis and Applications* (pp. 619-637). Springer, Singapore.
- [150] Sharma, A., & Kumar, S. (2021). Network Slicing and the Role of 5G in IoT Applications. In *Evolution of Software-Defined Networking Foundations for IoT and 5G Mobile Networks* (pp. 172-190). IGI Global.
- [151] Awasthi, Y., Sharma, A., & Pandey, R. (2019, November). Image Watermarking Using APDCBT in Selected Pixel Blocks. In *2019 8th International Conference System Modeling and Advancement in Research Trends (SMART)* (pp. 250-255). IEEE.
- [152] Othman, R. N., Alizadeh, F., & Sutherland, A. (2018, October). A novel approach for occluded ear recognition based on shape context. In *2018 International Conference on Advanced Science and Engineering (ICOASE)* (pp. 93-98). IEEE.
- [153] Ahmed, N. F., Omar, S. A., Othman, R. N., & Kakarash, Z. A. (2021). SQL Processor based on Intelligence Technique: Fuzzy Petri Net Database Applications. *Turkish Journal of Computer and Mathematics Education (TURCOMAT)*, 12(14), 1364-1371.
- [154] Abdulsamad, T., Kakarash, Z. A., Othman, R., Omar, S., & Ahmed, N. (2022). Distributed Resource Allocation Model with Presence of Multiple Jammer for Underwater Wireless Sensor Networks. *Iraqi Journal For Computer Science and Mathematics*, 3(1).
- [155] Omar, S. A., Othman, R. N., Ahmed, N. F., Ezat, H. S., & Kakarash, Z. A. EFFECTIVE DATA PARALLEL

OPTIMIZATION FOR QUANTIFYING THE MATHEMATICAL MODEL OF SUBSYSTEMS IN MULTIVARIABLE SYSTEMS.