
INVESTIGATING THE FACTORS THAT INFLUENCE STUDENTS` CHOICE OF ENGLISH STUDIES AS A MAJOR: THE CASE OF UNIVERSITY OF NOUAKCHOTT AL AASRIYA, MAURITANIA

Taleb Bilal Eli

*Assistant Professor, English Department
University of Nouakchott Al Aasriya, Mauritania,
talebiano@yahoo.com*

Lalla Aisha Sidi Hamou

*Assistant Professor, English Department
University of Nouakchott Al Aasriya, Mauritania,
lelouhe@hotmail.com*

ABSTRACT

The primary purpose of this study was to explore the factors that affect students` choice of English studies as a major at the University of Nouakchott Al Aasriya in Mauritania. A quantitative research methodology was used, and the data were collected from 107 students from the English Department. To verify the five hypotheses of this study and whether there is a significant positive relationship between the dependent variable (students` choice of English studies major) and the independent variables (personal interest, program content, education facilities, employment prospect and media), SPSS was used to provide a descriptive statistical analysis. The Findings of the study showed that personal interest and employment prospect do have a significant influence on students` choice of English studies as a major, but the influence is negative. Additionally, the study revealed that education facilities and media had a significant positive influence on students` choice. On the contrary, data analysis indicated that program content did have a significant influence on students` choice. Thus, H_3 and H_5 are accepted; while H_1 , H_2 and H_4 are rejected since there is no significant positive relationship between the independent variable and the dependent variables. The findings of this study contribute to literature by focusing on the determinant factors that influence students` choice of English studies major at University of Nouakchott Al Aasriya.

Keywords: *Factors, Students, Choice, English Studies, Major, University, Mauritania*

1. INTRODUCTION

In Mauritania, selecting a major after the accomplishment of the secondary school has always been a difficult path to take. This is a corollary of the fact that any selected major will have great consequences on the career path of the student. As a result, what the chosen major will lead to, is one of the underlying issues discussed by many researchers. For example, [1] stated, "choosing a college major is akin to choosing a path while at a crossroads. A chosen major, often a one-off decision, decides several aspects of a student`s career, leading them to a specialization in the areas of their professional interests" (p.54). Thus, the complexity of choosing major needs a thorough

scrutiny and students need to think very profoundly before making the decision if they are the ones to choose the major.

Clearly, the popularity or unpopularity of English studies major in Mauritania and the reasons that made students select this major is still an issue to be investigated [2][3]. Other researchers in the field have spoken about the driving force behind the popularity of certain majors [4]. Most of them argued that the main factors affecting the popularity of some majors remains a puzzling problem that disturbed and still disturbing academics across various streams who have been trying to decipher the roots of the problem [1][5][6][7][8][9][10][11].

In the context of University of Nouakchott Al Aasriya, the determinant factors contributing to students' choice in selecting English studies major is still an area of exploration [12][13]. Though many papers have been written on the most influential factors that compel students to choose their desirable majors, there is a lack of focus on English studies major [14][15]. Specifically, investigating the factors that influence students' choice of English studies major at University of Nouakchott Al Aasriya in Mauritania is the first of its kind [16].

English department—, which is a division of University of Nouakchott Al Aasriya that belongs to the ministry of higher education and scientific research—is open to all students who accomplished their high school requirements [17][18]. Students at University of Nouakchott used to choose any department that matches their specializations without any prerequisites, except in the scientific branches in which certain scores are required for some degrees' entry [19][20]. English department used to be chosen by students who finished their high schools and desire to specialize in English studies major without any restriction neither by the department nor by the ministry of higher education and scientific research [21][17]. However, students' specialization, scores, and achievement at the final stage of high school are among the determinant factors that may contribute to the selection of a specific major in Mauritania. Many researchers have dealt with students' choice for specific majors [22][23]. For example, [11][24] examined the main factors that influence students' choice of information system as a major, he argued that job availability, family and professors are important factors affecting students' choice [25][26][27].

Generally, this study tries to shed light on the major factors that nurture students' choice of English studies major [28], concentrating on variables such as personal interest, program content, education facilities, employment prospect and media. Specifically, the findings of this study will contribute to literature by identifying some of the determinant factors that influence students' choice of English studies major at University of Nouakchott Al Aasriya [29].

2. LITERATURE REVIEW

Many researchers have discussed factors influencing students to choose their majors across the globe, dealt with the topic from different angles, and based on different contexts [14]. [30] who investigated the issue in the context of the United Arab Emirates came to the conclusion that most of their respondents enter the university with a very clear future prospect and personal interest as a factor was the dominant in comparison with other factors such as family influence, job availability and salary [31] [32]. In a similar study conducted in UAE on students' choice of accounting major at X University, [33] examined some of the factors that influence students' choice in choosing their desirable majors such as reputation of the university, personal interests, job prospect, family members and peers, and media [34]. Based on this study there is a significant

relationship between family members and peers and on the student's choice of accounting as a major [35].

Additionally, [36] argued that the factors that may influence the choice of a university in general encompasses many decisions that lay the basis of a successful life or career [37][38]. Furthermore, both authors claim that things have changed in the past half-century because of many other factors that people need to take into consideration while examining the reasons that led the students to choose a particular university [39][40]. Another study done on the choice of study of a particular major, is the one conducted by [41], which shows a significant relationship between students' choice of the study program and factors such as product and promotion. Additionally, [42] pointed out that the "recognition of qualification by employers were the top important factors that influence students' choice of university [43] [44].

2.1. Personal Interest

One of the factors that may affect students' choice in selecting English studies as a major is the Fulbright scholarship program done by US. Embassy [45], which can be viewed as a personal interest. It creates an excellent opportunity of Mauritanian who speak English fluently to further their studies in America in each discipline for a specific duration [46][47]. It can be seen as a personal interest that may affect students' choice of English studies major as a result [48]. Some other researchers have discussed personal interest as a significant factor affecting students' choice [49] and [50]. On the other hand, in a research paper written by [51], it becomes clear that the personal interest is not the only reason that may drive student to select a specific major, rather the role that the instructors can play is very crucial in this process [52]. This point has been pinpointed by some other researchers who looked at the correction between students' choice of the major and the role played by the instructors [5]. Furthermore, [53] stated that "the choice is often described as a reflection of one's personal interest, which results in people to conclude their preferences by examining their selection" [54].

Studies have shown that family and relatives is a very significant factor that influence students' choice in choosing their majors [2]. In their study on factors determining the decision to pursue a university degree or a major in accounting, researchers pointed out that family influence was a very significant factor [55][33]. Similarly, [56] argued that their study has proven that there is a strong relationship between family, friends and students' choice of the major [57]. There were studies in literature in which researchers argued that there is no relationship between the family and relatives and students' choice of majors [58][59].

2.2. Reputation of Program Content

Another important factor that researchers have discussed in relation to students' selection of a specific major is the reputation of the department, university, or program [60]. In business studies and more specifically in accounting majors, researchers found a significant relationship between students' choice of accounting major and the reputation of the department in general [61][62]. Additionally, [63] in their research paper on Angola, found that the reputation of university, department and staff may impact the students' choice: "the institution reputation, as well as institution staff, has major significance in the HEI selection [64]. However, parents' financial condition constrains a lot in the HEI selection". (p. 26) Furthermore, [65] pointed out in their study that institution reputation has a great significant influence on students' selection of business and engineering majors [66].

2.3. Education Facilities

Education facilities is one of the factors that may influence students' choice of a specific major [67]. Nowadays, student's satisfaction remains a priority for any academic institution. Universities that possess great learning resources are more attractive for the new generation [68]. [69] who dealt with this factor argued that education facilities play a considerable role in attaining and meeting the goals of the university [70]. Moreover, [56] pointed out that education facilities are among the primary reasons for major selection in higher education institute [71]. Others found out that institutions with high quality facilities seem to have a greater learning experience [49][72]. Additionally, the university environment or campus facilities have been seen as a significant factor may affect students' perception of the university [63] [73]. On the other hand, universities with less education facilities have been considered to reduce students' motivation and eagerness to learn [74].

2.4. Employment prospect

No doubt that the career path is a very important factor to take into consideration before selecting a major [75]. It does not only create a sort of motivation for student to excel, but rather it urges student to have a clear plan for his/her future [76]. Many researchers interested in the relationship between students' choice and the job prospect have examined this factor [77]. Those who investigated the employment prospect and its effect on students' choice, argued that there is a significant relationship between students' choice and the job prospect [62]. Additionally, [33] who examined the issue in relation to accounting major did not see any significant relationship; while other researchers who inspected the issue in relation to accounting major found a significant impact [78][51]. Furthermore, [79] argued that the employment prospect is one of the major factor influencing students' choice in selecting institutions [80].

2.5. Media

Giving students the possibility to get enough information about their future desirable major at the high school level—whether from friends, family, the counselors, internet, university website, television, advertisement, and media—is very important for student's career path [81]. This can happen through different channels and means of communication at the secondary school level [82]. Many researchers have discussed this factor and its relationship with students' choice of their desirable major in a specific context [83]. For example, in a study conducted on parental influence on a student's selection of a college major, [50] pointed out that media was a very important factor influencing students' choice [84]. In another study on how to choose a college major, it has been assumed that there is a very significant relationship between media and students' choice of their desirable major [85].

3. HYPOTHESIS DEVELOPMENT

The main purpose of this study is to examine the factors that affect students' choice of English studies major at the University of Nouakchott Al Aasriya, Mauritania [86]. The coming pages of this paper will concentrate on the primary hypothesis associated with the study factors, such as the personal interest, program content, education facilities, employment prospect, and media [87]. Below are the hypotheses that this study tries to investigate:

Hypothesis 1:

H₀₁: Personal interest does not have a significant positive impact on student`s choice of English studies major.

H_{a1}: Personal interest has a significant positive impact on student`s choice of English studies major.

Hypothesis 2:

H₀₂: Program content does not have a significant positive impact on student`s choice of English studies major.

H_{a2}: Program content has a significant positive impact on student`s choice of English studies major.

Hypothesis 3:

H₀₃: Education Facilities do not have a significant positive impact on student`s choice of English studies major.

H_{a3}: Education Facilities have a significant positive impact on student`s choice of English studies major.

Hypothesis 4:

H₀₄: Employment prospect does not have a significant positive impact on student`s choice of English studies major.

H_{a4}: Employment prospect has a significant positive impact on student`s choice of English studies major.

Hypothesis 5:

H₀₅: Media does not have a significant positive impact on student`s choice of English studies major.

H_{a5}: Media has a significant positive impact on student`s choice of English studies major.

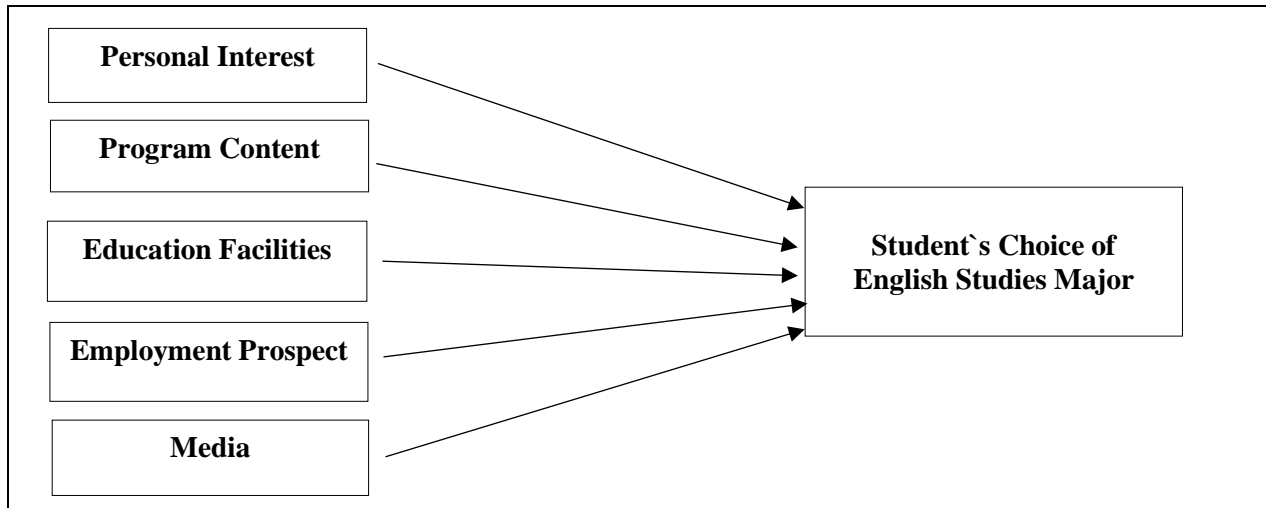


Figure 1: Research Model

4. METHODOLOGY

In this study, a quantitative research design was used where data were collected as per the availability and convenience of the respondents [88]. Closed-ended questions were distributed to the students via google form document, which was the main instrument for the data collection along with some class representatives who were encouraging students to participate in the survey. After the deadline given to the data collection, 107 responses were collected. In the questionnaire, students were asked to read and give answers that best describe their opinions on the major factors that led them to choose English Studies as a major. Then, data were inspected using the software SPSS (Statistical Package for the Social Sciences). The questionnaire survey is divided into two parts:

Part One-Demographic Profile: Part 1 is mainly about the demographic of the participants such as age, gender, level of study, educational system and language of study.

Part Two-Factors that Influence Students` Choice of English studies as a Major: The factors under scrutiny have been tested by the regression analysis.

4.1. Data Analysis

SPSS was used to provide a descriptive statistical analysis that can enable the researcher to measure both the demographic variables as well as the relationship between the dependent variable (students` choice of English studies major) and the independent variables (personal interest, program content, education facilities, employment prospect and media).

4.2. Analysis of the Results

The demographic of the study sample

a). Students' Gender

Respondents were asked to identify their gender. Table 1 shows that a total of 61 (57.0%) of the respondents were males, while 46 of them (43.0%) are female students.

Table 1: Respondents Gender

| R. Gender | Frequency | Percent | Valid Percent | Cumulative Percent |
|-----------|-----------|---------|---------------|--------------------|
| Male | 61 | 57.0 | 57.0 | 57.0 |
| Female | 46 | 43.0 | 43.0 | 100.0 |
| Total | 107 | 100.0 | 100.0 | |

b). Students' Age

Respondents were asked to indicate their category. Table 2 reveals that most of the respondents 100 (93.5%) belong the category (18-24) years old, and 7 respondents (6.5%) belong to the category (25-30) years old.

Table 2: Students Age

| R. Age | Frequency | Percent | Valid Percent | Cumulative Percent |
|--------|-----------|---------|---------------|--------------------|
| 18-25 | 100 | 93.5 | 93.5 | 93.5 |
| 26-30 | 7 | 6.5 | 6.5 | 100.0 |
| Total | 107 | 100.0 | 100.0 | |

c). Level of the Study

Participants were asked to tick their level of study. Table 3 tells about the fact that 45 (42.1%) of the respondents are from the 1st year; 31 (29.0%) are from 2nd year; and 31 (29.0%) are from the 3rd year.

Table 3: Level of study

| R. Level of Study | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------------------|-----------|---------|---------------|--------------------|
|-------------------|-----------|---------|---------------|--------------------|

| | | | | |
|---------------|-----|-------|-------|-------|
| 1st Year (L1) | 45 | 42.1 | 42.1 | 42.1 |
| 2nd Year (L2) | 31 | 29.0 | 29.0 | 71.0 |
| 3rd Year (L3) | 31 | 29.0 | 29.0 | 100.0 |
| Total | 107 | 100.0 | 100.0 | |

d). Educational System

Students were asked to indicate their educational system. Table 4 tells about the fact that 55 (51.4%) of the respondents are from the public education sector; 52 (48.60%) are from private education sector.

Table 4: Educational System

| R. Educational System | Frequency | Percent | Valid Percent | Cumulative Percent |
|-----------------------|-----------|---------|---------------|--------------------|
| Public sector | 55 | 51.4 | 51.4 | 51.4 |
| Private sector | 52 | 48.6 | 48.6 | 100.0 |
| Total | 107 | 100.0 | 100.0 | |

4.3.Factors Analysis

The hypotheses under scrutiny were analyzed based on the regression analysis as an attempt to see the nature of relationship between the dependent variable (students` choice of English studies major) and the independent variables (personal interest, program content, education facilities, employment prospect and media) [89]. The regression analysis is shown in table 5:

Table 5: Regression Data Analysis

| Independent Variables | B | Std. Error | Beta | T | Sig. |
|-----------------------|---|------------|------|---|------|
|-----------------------|---|------------|------|---|------|

| | | | | | |
|-----------------------------|-----------|------|-------|--------|------|
| Employment Prospect | - .279 | .131 | -.204 | -2.132 | .035 |
| Program Content | .110 | .116 | .091 | .952 | .343 |
| Education Facilities | .215 | .120 | .176 | 1.798 | .075 |
| Personal Interest | - .352 | .094 | -.353 | -3.751 | .000 |
| Media | .263 | .099 | .246 | 2.652 | .009 |

Based on the above analysis one may say that:

1. There is a significant relationship between personal interest and students` choice of English studies as a major, where the value of (beta, T) reached (-.353, -3.751), and Sig. reached (.000); There is a significant relationship between IV and the DV, but negative one. Hence, the hypothesis is rejected.
2. There is no significant relationship between program content and students` choice of English studies as a major. The value of (beta, T) reached (.091, .952), and the Sig. is (.343). Thus, the hypothesis is rejected.
3. There is a significant positive relationship between education facilities and students` choice of English studies as a major. The value of (beta, T) reached (.176, 1.798), and the Sig. reached (.075). As a result, the hypothesis is accepted.
4. There is a significant relationship between employment prospect and students` choice of English studies as a major. The value of (beta, T) reached (-.204, -2.132), and the Sig. reached (.035). These is a relationship between IV and the DV, but negative one. Therefore, the hypothesis is rejected.
5. There is a significant positive relationship between education facilities and students` choice of English studies as a major. The value of (beta, T) reached (.246, 2.652), and the Sig. reached (.009). Therefore, the hypothesis is accepted.

5. DISCUSSION OF THE FINDINGS

Table 4 is very important to inspect since it deals with where the students came. Though, the study did not consider the background of the students as a factor; still the findings of the study shows that it should be taken into consideration [90][91]. This is an upshot of the fact that the educational system that the parents/students chose is very crucial in the selection of the future major [92][93]. The general view is that students from private sector tend to have a quality education which may help them in the mastery of languages [94]. Therefore, they have an advantage to select a major in language studies [95]. However, the table shows that 51.4% of the total respondents came from the public sector and 48.6% from the private sector [96][97]. This

gives an indication that the educational system does not have a significant influence on the students' choice [98][99].

Additionally, result in table 5 is very vital for this study. There are five independent variables that have been analyzed in table five. The table shows that education facilities and media have a significant positive relationship with the dependent variable (students' choice of English studies as a major) [100][101][102]. Additionally, personal interest and employment prospect have a significant relationship, but this relationship is negative as it can be seen through the table [103][4]. On the other hand, program content has no significant relationship whatsoever with the dependent variable (students' choice of English studies as a major) [27][20]. This latter is one of the alarming issues that need to be taken into consideration to improve English studies program at University of Nouakchott Al Aasriya [104][105][106].

6. CONCLUSION AND IMPLICATIONS

This research paper is based on a distributed questionnaire to find out whether there is a significant positive relationship between the dependent variable (students' choice of English studies major) and the independent variables (personal interest, program content, education facilities, employment prospect and media) [107][108][109]. Based on the collected data, it becomes clear that students' choice of English studies as a major is driven by many factors [97][110]. Some are positively correlated such as the education facilities and media; and negatively correlated factors such as personal interest and employment prospect [111][112][113]. The factor that showed no significance at all with dependent variable is the program content [114][115]. To conclude, the findings of this study suggest that program content needs to be re-evaluated and the emphasis should be on quality. This will boost students' choice of English studies as a major [116][117].

7. RECOMMENDATION AND FUTURE RESEARCH

The study came up with some insights for the future research and considerations. For example, this study dealt with a single department which is a division of a single university [118][119]. Hence, future research should be done on multiple departments in two or three university as an attempt to intensify the study and get variety of responses from different institutions [120][121]. Furthermore, further study can concentrate on the regional aspects that may have a great deal in influencing the students' choice especially in a context like Mauritania [122][123]. Also, the educational system adopted in the secondary schools can play a major role in relation to students' choice of a specific major [124][125][126]. Additionally, language of instruction in the secondary school may have a great influence in the selection of language studies major [127][26][128][129]. Therefore, researchers need to examine these factors.

REFERENCES

- [1] N. Mishra, A. A. Ismail, and S. J. Al Hadabi, "A major choice: Exploring the factors influencing undergraduate choices of communication major," *Learn. Teach. High. Educ. Gulf Perspect.*, 2017.
- [2] S. Abbas *et al.*, "Convolutional neural network based intelligent handwritten document recognition (2022) Computers," *Mater. Contin.*, vol. 70, no. 3, pp. 4563–4581.
- [3] S. Mehmood *et al.*, "Malignancy Detection in Lung and Colon Histopathology Images Using Transfer Learning With Class Selective Image Processing," *IEEE Access*, vol. 10, pp. 25657–25668, 2022.
- [4] S. Y. Siddiqui *et al.*, "IOMT cloud-based intelligent prediction of breast cancer stages empowered with Deep Learning," *IEEE Access*, vol. 9, pp. 14649–46478, Oct. 2021.
- [5] A. Quezada and Y. N. Chi, "Knowing how business students choose accounting as a major," *J. Bus. Econ.*, vol. 4, no. 2, pp. 124–134, 2013.
- [6] T. A. Bowers, "Student Attitudes toward journalism as a Major and a Career," *Journal. Q.*, vol. 51, no. 2, pp. 265–270, 1974.
- [7] C. E. George-Jackson, "Generation me: influences of students' choice of major," *Proj. STEP-UP. Univ. Illinois Urbana-Champaign*, 2012.
- [8] D. C. Gibson, "Public relations education in a time of change," *Public Relations Q.*, vol. 32, no. 3, p. 25, 1987.
- [9] S. Richardson, "Undergraduates' perceptions of tourism and hospitality as a career choice," *Int. J. Hosp. Manag.*, vol. 28, no. 3, pp. 382–388, 2009.
- [10] E. M. Wiltse, "Using writing to predict students' choice of majors," *Journal. \& Mass Commun. Educ.*, vol. 61, no. 2, pp. 179–194, 2006.
- [11] W. Zhang, "Why IS: understanding undergraduate students' intentions to choose an information systems major," *J. Inf. Syst. Educ.*, vol. 18, no. 4, pp. 447–458, 2007.
- [12] Q.-T.-A. Khan *et al.*, "Modeling habit patterns using conditional reflexes in agency," *Intell. Autom. Soft Comput.*, vol. 29, no. 3, pp. 539–552, Aug. 2021.
- [13] T. M. Ghazal *et al.*, "Alzheimer disease detection empowered with transfer learning," 2022.
- [14] A. K. Madhavi Latha Nandi, "Centralization and the success of ERP implementation," " *J. Enterp. Inf. Manag.*, vol. 29, no. 5, pp. 728–750, 2016.
- [15] T. M. Ghazal, "A review on security threats, vulnerabilities, and counter measures of 5G enabled Internet-of-Medical-Things," *IET Commun.*, vol. 16, no. 5, pp. 421–432, 2022.
- [16] M. A. Alnuaimi, H. M. Alzoubi, and N. N. Alnazer, "Analysing the appropriate cognitive styles and its effect on strategic innovation in Jordanian universities," *Int. J. Bus. Excell.*, vol. 13, no. 1, p. 127, 2017, doi: 10.1504/ijbex.2017.10006235.
- [17] M. A. Khan, T. M. Ghazal, S.-W. Lee, and A. Rehman, "Data fusion-based machine learning architecture for intrusion detection 2/6/22, 8:01 PM," *Page*, vol. 70, no. 2, pp. 3399–3413, 2022.
- [18] S. Zafar *et al.*, "Assistive Devices Analysis for Visually Impaired Persons: A Review on Taxonomy," *IEEE Access*, 2022.
- [19] S. Hamadneh, O. Pederson, M. Alshurideh, B. Al Kurdi, and H. Alzoubi, "AN INVESTIGATION OF THE ROLE OF SUPPLY CHAIN VISIBILITY INTO THE AN INVESTIGATION OF THE ROLE OF SUPPLY CHAIN VISIBILITY INTO THE SCOTTISH BLOOD," no. September, 2021.
- [20] T. M. Ghazal, M. K. Hasan, S. N. H. Abdullah, K. A. Abubakkar, and M. A. M. Afifi, "IoMT-enabled fusion-based model to predict posture for smart healthcare systems (2022) Computers," *Mater. Contin.*, vol. 71, no. 2, pp. 2579–2597.

- [21] A. Vargas-Sánchez *et al.*, “Editorial Team Editor in Chief Editorial Board Advisory Board (Spanish Members) Advisory Board (Other European Members) Advisory Board (Members from the rest of the world).”
- [22] S. Joghee, H. M. Alzoubi, and A. R. Dubey, “Decisions effectiveness of FDI investment biases at real estate industry: Empirical evidence from Dubai smart city projects,” *Int. J. Sci. Technol. Res.*, vol. 9, no. 3, pp. 3499–3503, 2020.
- [23] U. Ahmed *et al.*, “Prediction of Diabetes Empowered With Fused Machine Learning,” *IEEE Access*, vol. 10, pp. 8529–8538, 2022.
- [24] N. Ali *et al.*, “Fusion-based supply chain collaboration using Machine Learning Techniques,” 2022.
- [25] M. K. Hasan, M. Taher, and R. Saeed, “A.c A review on security threats, vulnerabilities, and counter measures of 5G enabled Internet-of-Medical-Things,” ; *IET Commun.*, vol. 2022, no. 16, p. 5.
- [26] M. K. Hasan *et al.*, “Fischer linear discrimination and quadratic discrimination analysis--based data mining technique for internet of things framework for Healthcare,” *Front. Public Heal.*, vol. 9, Oct. 2021.
- [27] T. M. Ghazal and N. Taleb, *Feature optimization and identification of ovarian cancer using internet of medical things*. Expert Systems, 2022.
- [28] I. J. Chen, “Planning for ERP systems: analysis and future trend,” *Bus. Process Manag. J.*, vol. 7, no. 5, pp. 374–386, 2001.
- [29] H. M. Alzoubi, M. Alshurideh, B. A. Kurdi, I. Akour, and R. Aziz, “Does BLE technology contribute towards improving marketing strategies, customers’ satisfaction and loyalty? The role of open innovation,” *Int. J. Data Netw. Sci.*, vol. 6, no. 2, pp. 449–460, 2022.
- [30] D. J. Gallacher, A. Skuba, and R. Al-Bahri, “Awareness and perceptions of available Major programs by first year Zayed University students,” *Learn. Teach. High. Educ. Gulf Perspect.*, 2010.
- [31] T. Walters, N. Mourtada-Sabbah, M. Al Mutawa, and J. W. Fox, “In their own words: Women entering the workforce in the UAE,” *J. Soc. Aff.*, vol. 25, no. 97, pp. 11–45, 2008.
- [32] A. M. Aladwani, “Change management strategies for successful ERP implementation. Business Process management journal,” vol. 7, no. 3, pp. 266–275, 2001.
- [33] A. Rababah and others, “Factors influencing the students’ choice of accounting as a major: The case of X University in United Arab Emirates,” *Int. Bus. Res.*, vol. 9, no. 10, pp. 25–32, 2016.
- [34] T. Mehmood, H. M. Alzoubi, M. Alshurideh, A. Al-Gasaymeh, and G. Ahmed, “Schumpeterian entrepreneurship theory: Evolution and relevance,” *Acad. Entrep. J.*, vol. 25, no. 4, pp. 1–10, 2019.
- [35] M. Alnuaimi, H. M. Alzoubi, D. Ajelat, and A. A. Alzoubi, “Towards intelligent organisations: An empirical investigation of learning orientation’s role in technical innovation,” *Int. J. Innov. Learn.*, vol. 29, no. 2, pp. 207–221, 2021, doi: 10.1504/IJIL.2021.112996.
- [36] L. Agrey and N. Lampadan, “Determinant factors contributing to student choice in selecting a university,” *J. Educ. Hum. Dev.*, vol. 3, no. 2, pp. 391–404, 2014.
- [37] T. M. Ghazal *et al.*, “IoT for Smart Cities: Machine Learning Approaches in Smart Healthcare—A Review,” *Futur. Internet*, vol. 13, no. 8, p. 218, 2021, doi: 10.3390/fi13080218.
- [38] M. T. Alshurideh *et al.*, “Fuzzy assisted human resource management for supply chain management issues,” *Ann. Oper. Res.*, pp. 1–19, 2022.
- [39] M. Palmer, J. Hayek, D. Hossler, S. A. Jacob, H. Cummings, and J. Kinzie, “Fifty years of

- college choice: Social, political and institutional influences on the decision-making process,” 2004.
- [40] T. M. Ghazal *et al.*, “Energy demand forecasting using fused machine learning approaches,” 2022.
- [41] A. Dessy, S. Megawati, and A. Siti, “Determination of student decision factors in choosing study programs in the faculty of public health at Andalas University, Indonesia,” *Russ. J. Agric. Socio-Economic Sci.*, vol. 91, no. 7, 2019.
- [42] F. F. Fosu and K. Poku, “Exploring the factors that influence students’ choice of higher education in Ghana,” *Eur. J. Bus. Manag.*, vol. 6, no. 28, pp. 209–220, 2014.
- [43] T. M. Ghazal, *Positioning of UAV base stations using 5G and beyond networks for IOMT applications*. Arabian Journal for Science and Engineering, 2021.
- [44] G. F. H. Raihana, “Cloud ERP--a solution model.” *International Journal of Computer Science and Information Technology & Security*, vol. 2, no. 1, pp. 76–79, 2012.
- [45] U. Ahmed *et al.*, *No Title*. of Diabetes Empowered With Fused Machine Learning IEEE Access, 2022.
- [46] F. Tian and X. Sean Xin, “How Do Enterprise Resource Planning Systems Affect Firm Risk?,” *Post-Implementation Impact*, *MIS Q.*, vol. 39, no. 1, pp. 39–49, 2015.
- [47] M. M. Bukhari *et al.*, “An Intelligent Proposed Model for Task Offloading in Fog-Cloud Collaboration Using Logistics Regression,” *Comput. Intell. Neurosci.*, vol. 2022, 2022.
- [48] A. Alhamad, M. Alshurideh, K. Alomari, S. Hamouche, S. Al-Hawary, and H. M. Alzoubi, “The effect of electronic human resources management on organizational health of telecommunications companies in Jordan,” *Int. J. Data Netw. Sci.*, vol. 6, no. 2, pp. 429–438, 2022.
- [49] M. Lewis, “Where children learn: Facilities conditions and student test performance in Milwaukee public schools,” *ISSUETRAK, Scottsdale, AZ Counc. Educ. Facil. Planners Int.*, 2000.
- [50] C. Pearson and M. Dellman-Jenkins, “Parental influence on a student’s selection of a college major,” *Coll. Stud. J.*, vol. 31, no. 3, pp. 301–313, 1997.
- [51] M. A. Geiger and S. M. Ogilby, “The first course in accounting: students’ perceptions and their effect on the decision to major in accounting,” *J. Account. Educ.*, vol. 18, no. 2, pp. 63–78, 2000.
- [52] H. M. Alzoubi and R. Aziz, “Does emotional intelligence contribute to quality of strategic decisions? The mediating role of open innovation,” *J. Open Innov. Technol. Mark. Complex.*, vol. 7, no. 2, 2021, doi: 10.3390/joitmc7020130.
- [53] K. Moorthy *et al.*, “Factors Affecting Students Choice of Higher Education Institution: A Malaysian Perspective,” *World J. Vocat. Educ. Train.*, vol. 1, no. 2, pp. 59–74, 2019.
- [54] N. M. Alsharari, “Institutional logics and ERP implementation in public sector agency,” *J. Dev. Areas*, vol. 51, no. 2, pp. 417–425, 2017.
- [55] B. Sojkin and A. Bartkowiak Pawełand Skuza, “Determinants of higher education choices and student satisfaction: the case of Poland,” *High. Educ.*, vol. 63, no. 5, pp. 565–581, 2012.
- [56] I. Price, F. Matzdorf, L. Smith, and H. Agahi, “The Impact of Facilities on Student Choice of University,” 2002.
- [57] C. Lee and G. Ahmed, “Improving IoT Privacy, Data Protection and Security Concerns,” *Int. J. Technol. Innov. Manag.*, vol. 1, no. 1, pp. 18–33, 2021.
- [58] J. Cohen and D. M. Hanno, “An analysis of underlying constructs affecting the choice of accounting as a major,” *Issues Account. Educ.*, vol. 8, no. 2, p. 219, 1993.
- [59] S. S. S. Ali and M. Tinggi, “Factors influencing the students’ choice of accounting as a major,” *IUP J. Account. Res. & Audit Pract.*, vol. 12, no. 4, p. 25, 2013.

- [60] S. Hamadneh, O. Pedersen, M. Alshurideh, B. A. Kurdi, and H. M. Alzoubi, "An Investigation Of The Role Of Supply Chain Visibility Into The Scottish Blood Supply Chain," *J. Leg. Ethical Regul. Issues*, vol. 24, no. 1, pp. 1–12, 2021.
- [61] M. Kaur and E. Y. Leen, "Factors Influencing Undergraduates' Choice of BusinessMajor," *INTI Int. Univ. Coll.*, 2007.
- [62] D. Kim, F. S. Markham, and J. D. Cangelosi, "Why students pursue the business degree: A comparison of business majors across universities," *J. Educ. Bus.*, vol. 78, no. 1, pp. 28–32, 2002.
- [63] N. Nguyen and G. LeBlanc, "Image and reputation of higher education institutions in students' retention decisions," *Int. J. Educ. Manag.*, 2001.
- [64] A. Alzoubi, "Renewable Green hydrogen energy impact on sustainability performance," *Int. J. Comput. Inf. Manuf.*, vol. 1, no. 1, pp. 94–105, 2021, [Online]. Available: <https://doi.org/10.54489/ijcim.v1i1.46>.
- [65] R. I. Sabir, W. Ahmad, R. U. Ashraf, and N. Ahmad, "Factors affecting university and course choice: A comparison of undergraduate engineering and business students in Central Punjab, Pakistan," *J. Basic Appl. Sci. Res.*, vol. 3, no. 10, pp. 298–305, 2013.
- [66] M. Shamout, R. Ben-Abdallah, M. Alshurideh, A. Kurdi, and H. B., "S. (2022). A conceptual model for the adoption of autonomous robots in supply chain and logistics industry," *Uncertain Supply Chain Manag.*, vol. 10, no. 2, pp. 577–592.
- [67] H. Alzoubi, M. Alshurideh, B. Al Kurdi, and M. Inairat, "Do perceived service value, quality, price fairness and service recovery shape customer satisfaction and delight? A practical study in the service telecommunication context," *Uncertain Supply Chain Manag.*, vol. 8, no. 3, pp. 579–588, 2020, doi: 10.5267/j.uscm.2020.2.005.
- [68] N. M. Alsharari, "Internationalization of the higher education system: an interpretive analysis," *Int. J. Educ. Manag.*, vol. 32, no. 3, pp. 359–381, 2018.
- [69] S. Kärnä, P. Julin, and S. Nenonen, "User satisfaction on a university campus by students and staff," *Intell. Build. Int.*, vol. 5, no. 2, pp. 69–82, 2013.
- [70] M. Farouk, "The Universal Artificial Intelligence Efforts to Face Coronavirus COVID-19," *Int. J. Comput. Inf. Manuf.*, vol. 1, no. 1, pp. 77–93, 2021, [Online]. Available: <https://doi.org/10.54489/ijcim.v1i1.47>.
- [71] M. F. Khan and T. M. Ghazal, "Raed A," *Said, Areej Fatima, Sagheer Abbas, M.A. Khan, Ghassan F. Issa, Munir Ahmad Muhammad Adnan Khan , An iomt-enabled smart Healthc. Model to Monit. Elder. people using Mach. Learn. Tech. Comput. Intell. Med. Internet Thin*, vol. 2021.
- [72] C. K. Tanner, "Effects of school design on student outcomes," *J. Educ. Adm.*, 2009.
- [73] E. P. Mondol, "The Impact of Block Chain and Smart Inventory System on Supply Chain Performance at Retail Industry," *Int. J. Comput. Inf. Manuf.*, vol. 1, no. 1, pp. 56–76, 2021, [Online]. Available: <https://doi.org/10.54489/ijcim.v1i1.30>.
- [74] A. Hassanbeigi and J. Askari, "A study of the most important risk factors of motivational deficiencies in university students," *Procedia-Social Behav. Sci.*, vol. 5, pp. 1972–1976, 2010.
- [75] H. M. Alzoubi and R. Yanamandra, "Investigating the mediating role of information sharing strategy on agile supply chain," *Uncertain Supply Chain Manag.*, vol. 8, no. 2, pp. 273–284, 2020.
- [76] H. M. Alzoubi, G. Ahmed, A. Al-Gasaymeh, and B. Al Kurdi, "Empirical study on sustainable supply chain strategies and its impact on competitive priorities: The mediating role of supply chain collaboration," *Manag. Sci. Lett.*, vol. 10, no. 3, pp. 703–708, 2020, doi: 10.5267/j.msl.2019.9.008.

- [77] T. M. Ghazal, R. A. Said, and N. Taleb, *Internet of vehicles and autonomous systems with AI for Medical Things*. Soft Computing, 2021.
- [78] S. E. Strasser, C. Ozgur, and D. L. Schroeder, "Selecting a business college major: An analysis of criteria and choice using the analytical hierarchy process," *Am. J. Bus.*, vol. 17, no. 2, pp. 47–56, 2002.
- [79] Z. Yaacob, Z. M. Darus, M. Mokhtar, and S. K. Omar, "Factors for selecting institution of higher learning among pre degree students in Malaysia," *J. Pendidik. Bitara UPSI*, vol. 13, no. 2, pp. 29–37, 2020.
- [80] F. Matloob *et al.*, "Software defect prediction using Ensemble Learning: A Systematic Literature Review," *IEEE Access*, vol. 9, pp. 98754–98771, Jul. 2021.
- [81] A. Alzoubi, "The impact of Process Quality and Quality Control on Organizational Competitiveness at 5-star hotels in Dubai. International Journal of Technology," *Innov. Manag. (IJTIM)*, vol. 1, no. 1, pp. 54–68, 2021.
- [82] A. Al Ali, "The Impact of Information Sharing and Quality Assurance on Customer Service at UAE Banking Sector," *Int. J. Technol. Innov. Manag.*, vol. 1, no. 1, pp. 1–17, 2021.
- [83] S. Maguire, "Udechukwu Ojiako Al Said, (2010)," *ERP Implement. Omantel a case study*," *Ind. Manag. Data Syst.*, vol. 110, no. 1, pp. 78–92.
- [84] S. Guergov and N. Radwan, "Blockchain Convergence: Analysis of Issues Affecting IoT, AI and Blockchain," *Int. J. Comput. Inf. Manuf.*, vol. 1, no. 1, pp. 1–17, 2021, [Online]. Available: <https://doi.org/10.54489/ijcim.v1i1.48>.
- [85] L. L. Andrews, *How to choose a college major*. McGraw Hill Professional, 2006.
- [86] M. K. Chang, W. Cheung, C. H. Cheng, and J. H. Yeung, "Understanding ERP system adoption from the user's perspective. International Journal of Production Economics," vol. 113, no. 2, pp. 928–942, 2008.
- [87] N. M. Alsharari, "The development of accounting education and practice in an environment of socio-economic transformation in the Middle East: The case of Jordan. International Journal of Educational Management," vol. 31, no. 6, pp. 736–751, 2017.
- [88] M. T. Alshurideh *et al.*, "assisted human resource management for supply chain management issues (2022) Annals of Operations Research."
- [89] T. M. Ghazal *et al.*, "Hep-pred: Hepatitis C staging prediction using fine Gaussian SVM," *Comput. Mater. Contin.*, vol. 69, no. 1, pp. 191–203, Jun. 2021.
- [90] D. Miller, "The Best Practice of Teach Computer Science Students to Use Paper Prototyping. International Journal of Technology," *Innov. Manag. (IJTIM)*, vol. 1, no. 2, pp. 42–63, 2021.
- [91] T. Eli, "Students Perspectives on the Use of Innovative and Interactive Teaching Methods at the University of Nouakchott Al Aasriya, Mauritania: English Department as a Case Study. International Journal of Technology," *Innov. Manag. (IJTIM)*, vol. 1, no. 2, pp. 90–104, 2021.
- [92] R. Bibi *et al.*, "Edge AI-based automated detection and classification of road anomalies in VANET using Deep Learning," *Comput. Intell. Neurosci.*, vol. 2021, pp. 1–19, Sep. 2021.
- [93] T. M. Ghazal, *Internet of things with Artificial Intelligence for Health Care Security*. Arabian Journal for Science and Engineering, 2021.
- [94] T. M. Ghazal *et al.*, "Performances of K-means clustering algorithm with different distance metrics," *Intell. Autom. Soft Comput.*, vol. 29, no. 3, pp. 735–742, Aug. 2021.
- [95] B. Al Kurdi, H. Elrehail, and H. M. Alzoubi, "THE INTERPLAY AMONG HRM PRACTICES , JOB SATISFACTION AND INTENTION TO LEAVE : AN EMPIRICAL INVESTIGATION," no. August, 2021.
- [96] T. M. Ghazal *et al.*, "IOT for Smart Cities: Machine Learning Approaches in smart

- healthcare---A Review,” *Futur. Internet*, vol. 13, p. 8, Aug. 2021.
- [97] A. Q. M. Alhamad, I. Akour, M. Alshurideh, B. A. Kurdi, and H. M. Alzoubi, “Predicting the intention to use google glass: A comparative approach using machine learning models and PLS-SEM,” *Int. J. Data Netw. Sci.*, vol. 5, no. 3, pp. 311–320, 2021.
- [98] J. R. Hanaysha, M. E. Al-Shaikh, S. Joghee, and H. M. Alzoubi, “Impact of Innovation Capabilities on Business Sustainability in Small and Medium Enterprises,” *FIIB Bus. Rev.*, vol. 12, no. 1, pp. 55–68, 2021.
- [99] N. M. Alsharari, “The Diffusion of Accounting Innovations in the New Public Sector as Influenced by IMF Reforms: Actor-Network Theory,” *Int. J. Actor-Network Theory Technol. Innov.*, vol. 8, no. 4, pp. 26–51, 2016.
- [100] K. L. Lee, N. A. N. Azmi, J. R. Hanaysha, H. M. Alzoubi, and M. T. Alshurideh, “The effect of digital supply chain on organizational performance: An empirical study in Malaysia manufacturing industry,” *Uncertain Supply Chain Manag.*, vol. 10, no. 2, pp. 495–510, 2022.
- [101] A. Akhtar, S. Akhtar, B. Bakhtawar, A. A. Kashif, N. Aziz, and M. S. Javeid, “COVID-19 Detection from CBC using Machine Learning Techniques. International Journal of Technology,” *Innov. Manag. (IJTIM)*, vol. 1, no. 2, pp. 65–78, 2021.
- [102] K. L. Lee, P. N. Romzi, J. R. Hanaysha, H. M. Alzoubi, and M. Alshurideh, “Investigating the impact of benefits and challenges of IOT adoption on supply chain performance and organizational performance: An empirical study in Malaysia,” *Uncertain Supply Chain Manag.*, vol. 10, no. 2, pp. 537–550, 2022.
- [103] T. M. Ghazal *et al.*, “Energy demand forecasting using fused machine learning approaches (2022) Intelligent Automation and Soft Computing, 31 (1),” *p*, pp. 539–553.
- [104] S. Z. et al., “Assistive Devices Analysis for Visually Impaired Persons: A Review on Taxonomy,” *IEEE Access*, vol. 10, pp. 13354–13366, 2022, doi: 10.1109/ACCESS.2022.3146728.
- [105] N. M. Alsharari, “Multilevel institutional analysis of accounting change in public management,” *Int. J. Organ. Anal.*, vol. 26, no. 1, pp. 91–106, 2018.
- [106] N. Radwan and M. Farouk, “The Growth of Internet of Things (IoT) In The Management of Healthcare Issues and Healthcare Policy Development. International Journal of Technology,” *Innov. Manag. (IJTIM)*, vol. 1, no. 1, pp. 69–84, 2021.
- [107] H. M. Alzoubi and R. Yanamandra, “Investigating the mediating role of information sharing strategy on agile supply chain,” *Uncertain Supply Chain Manag.*, vol. 8, no. 2, pp. 273–284, 2020, doi: 10.5267/j.uscm.2019.12.004.
- [108] N. Alsharari, “Integrating Blockchain Technology with Internet of things to Efficiency. International Journal of Technology,” *Innov. Manag. (IJTIM)*, vol. 1, no. 2, pp. 1–13, 2021.
- [109] M. A. Khan, “Challenges Facing the Application of IoT in Medicine and Healthcare,” *Int. J. Comput. Inf. Manuf.*, vol. 1, no. 1, pp. 39–55, 2021, [Online]. Available: <https://doi.org/10.54489/ijcim.v1i1.32>.
- [110] E. Rehman, M. A. Khan, T. R. Soomro, N. Taleb, M. A. Afifi, and T. M. Ghazal, “Using blockchain to ensure trust between donor agencies and ngos in under-developed countries,” *Computers*, vol. 10, p. 8, Aug. 2021.
- [111] N. M. Alsharari, “Results Based Costing (RBC) System: Questioning the Unit of Analysis in ABC,” *Corp. Ownersh. Control*, vol. 13, no. 2, pp. 587–603, 2016.
- [112] N. Aziz and S. Aftab, “Data Mining Framework for Nutrition Ranking: Methodology: SPSS Modeller. International Journal of Technology,” *Innov. Manag. (IJTIM)*, vol. 1, no. 1, pp. 85–95, 2021.
- [113] Y. C. Shen, P. S. Chen, and C. H. Wang, “A study of enterprise resource planning (ERP)

- system performance measurement using the quantitative balanced scorecard approach. *Computers in Industry*,” vol. 75, no. 1, pp. 127–139, 2016.
- [114] M. S. Aslam *et al.*, “Energy-efficiency model for residential buildings using supervised machine learning algorithm,” *Intell. Autom. Soft Comput.*, vol. 30, no. 3, pp. 881–888, Aug. 2021.
- [115] M. Alshurideh, A. Gasaymeh, G. Ahmed, H. Alzoubi, and B. Al Kurd, “Loyalty program effectiveness: Theoretical reviews and practical proofs,” *Uncertain Supply Chain Manag.*, vol. 8, no. 3, pp. 599–612, 2020, doi: 10.5267/j.uscm.2020.2.003.
- [116] K. Almgren, “Exploring Enterprise Resource Planning Systems: A Comprehensive Analysis of ERP Systems,” *Int. J. Bus. Soc. Sci.*, vol. 5, p. 7, 2014.
- [117] R. Saade and H. Nijher, “Critical success factors in enterprise resource planning implementation,” *J. Enterp. Inf. Manag.*, vol. 29, no. 1, pp. 72–96, 2016.
- [118] T. Mehmood, “Does Information Technology Competencies and Fleet Management Practices lead to Effective Service Delivery?,” *Empir. Evid. from E-Commerce Ind.*, vol. 1, no. 2, pp. 14–41, 2021.
- [119] J. R. Hanaysha, A. Shaikh, and A. M. E., “H,” *M. Importance Mark. Mix Elem. Determ. Consum. Purch. Decis. Retail Mark.*, vol. 2, no. 6, pp. 56–72, 2021.
- [120] S. M. *et al.*, “Malignancy Detection in Lung and Colon Histopathology Images Using Transfer Learning With Class Selective Image Processing,” *IEEE Access*, vol. 10, pp. 25657–25668, 2022, doi: 10.1109/ACCESS.2022.3150924.
- [121] A. Cruz, “Convergence between Blockchain and the Internet of Things. International Journal of Technology,” *Innov. Manag. (IJTIM)*, vol. 1, no. 1, pp. 34–53, 2021.
- [122] H. M. Alzoubi, M. Vij, A. Vij, and J. R. Hanaysha, “What Leads Guests to Satisfaction and Loyalty in UAE Five-Star Hotels? AHP Analysis to Service Quality Dimensions,” *ENLIGHTENING Tour. A PATHMAKING J.*, vol. 11, no. 1, pp. 102–135, 2021.
- [123] A. A. Kashif, B. Bakhtawar, A. Akhtar, S. Akhtar, N. Aziz, and M. S. Javeid, “Treatment Response Prediction in Hepatitis C Patients using Machine Learning Techniques,” *Int. J. Technol. Innov. Manag.*, vol. 1, no. 2, pp. 79–89, 2021.
- [124] T. M. G. Muhammad Mazhar Bukhari, U. F. H. W. Sagheer Abbas M. A. Khan, and M. Ahmad, “and Khan Muhammad Adnan,” *An Intell. Propos. Model Task Offloading Fog-Cloud Collab. Using Logist. Regres. Comput. Intell. Neurosci.*, vol. 2022, no. 36060, p. 68, 2022.
- [125] N. Ali *et al.*, “Modelling supply chain information collaboration empowered with Machine Learning Technique,” *Intell. Autom. Soft Comput.*, vol. 29, no. 3, pp. 243–257, Jul. 2021.
- [126] M. L. Nandi, M. L. Nandi, A. Kumar, and A. Kumar, “Centralization and the success of ERP implementation. Journal of Enterprise Information Management,” vol. 29, no. 5, pp. 728–750, 2016.
- [127] H. Alzoubi and G. Ahmed, “Do TQM practices improve organisational success? A case study of electronics industry in the UAE,” *Int. J. Econ. Bus. Res.*, vol. 17, no. 4, pp. 459–472, 2019, doi: 10.1504/IJEER.2019.099975.
- [128] A. J. Obaid, “Assessment of Smart Home Assistants as an IoT,” *Int. J. Comput. Inf. Manuf.*, vol. 1, no. 1, pp. 18–38, 2021, [Online]. Available: <https://doi.org/10.54489/ijcim.v1i1.34>.
- [129] A. Q. M. Alhamad, I. Akour, M. Alshurideh, A. Q. Al-Hamad, B. Al Kurdi, and H. Alzoubi, “Predicting the intention to use google glass: A comparative approach using machine learning models and PLS-SEM,” *Int. J. Data Netw. Sci.*, vol. 5, no. 3, pp. 311–320, 2021, doi: 10.5267/j.ijdns.2021.6.002.