Gendered Response to Artificial Intelligence (AI) in Modern Linguistics: Evaluating the Perspectives of Senior Lecturers on Technological Innovations

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Abstract

The incorporation of Artificial Intelligence (AI) into contemporary linguistics exhibits a significant and transformational change in the discipline. AI technologies, which include natural language processing (NLP), machine learning, and computational linguistics, have significantly transformed the methods employed by linguists for studying, analyzing, and applying linguistic principles. However, as the integration of artificial intelligence (AI) within modern linguistics has presented novel opportunities, facilitating scholars in their investigation of language at an unprecedented scale and level of intricacy, it is pertinent to understand how language educators; especially, the university lecturers perceive these positive innovations. Nevertheless, the current research is focused on examining the responses of senior lecturers on the integration of AI in modern linguistics. The research objective further centered on gender variation in the responses of these lecturers in regard to technological innovations brought in by the integration of AI in modern linguistics. Using a quantitative research method, a good number of participants who are mainly senior lectures were engaged in an online interview. These participants consisting of forty-six (46) females and thirty-seven (37) males shared their opinions with regard to the focus of the study. Moreover, two important hypotheses were developed for this research and a t-test was conducted to validate these hypotheses. The findings generated from the data analyzed indicated that although there are no significant differences in the perceptions of both male and female lecturers on the integration of AI in modern linguistics, there are some aspects specific to modern linguistics with observable gender variations in responses of the participants. Such aspect includes easy adaption of new AI tools, level of benefits and ethical challenges. Also, while female lecturers address the AI integration in modern linguistics from ethical and beneficial point of view, the male counterparts focused more on accessibility and inclusivity.

Keywords: Artificial Intelligence, Modern Linguistics, Gender Variation, Technological Innovations, Machine Leaning, Computational Linguistics.

1. Introduction

Modern linguistics is characterized with a change from the perception of what language study is and what it ought to be. Historically, the field of language research frequently adopted a prescriptive approach, wherein the emphasis was placed on prescribing the appropriate usage of language according to established norms and standards. Since, the field of linguistics has undergone a paradigm shift during the mid-20th century, rather than imposing prescriptive language rules, contemporary linguists adopt an approach that involves observing and analyzing the actual usage of language by speakers. With the widespread use of AI in human activities, the field of modern linguistics has further experienced a major breakthrough as some technological tools are being utilized to solve some of the complex linguistic difficulties; including enhancement of cross-cultural communication (Cassier, 1945; Blodgett et al., 2020; Bataineh et al., 2018). According to Lenci (2020), the historical connection between artificial intelligence (AI) and linguistics can be traced to Noam Chomsky's transformational-generative grammar. The research established the fundamental principles for employing computer methods in the analysis of language.

Artificial Intelligence (AI) has significantly improved the field of linguistics whilst providing different relevant approaches and tools for language study. Among these approaches is the utilization of natural language processing (NLP). Natural Language Processing (NLP) is a specialized domain within the field of artificial intelligence (AI) and linguistics, which centers on the study of the interplay between computers and human language. The field of study involves the advancement of algorithms, models, and systems that facilitate machines in comprehending (Boznouvic & Sindik, 2011; Zhou & Xu, 2007). The advancement of NLP further led to the introduction of machine translation. As a discipline within the realm of artificial intelligence (AI) and natural language processing (NLP), machine translation is dedicated to facilitating interlingual communication and comprehension by autonomously generating translations for individuals conversing in different languages.

Generally, technological advancements offer the potential for enhanced efficiency, accuracy, and ease of access in linguistic pursuits. Artificial intelligence (AI) benefits in modern linguistics extend beyond providing solution to linguistic problems, offer new approaches of teaching linguistics to students.

2. Literature Review

This section provides a concise review of some related literature connected to artificial intelligence (AI) integration to modern linguistics. However, this review serves as a basics to the understanding of the main objective of this research.

2.1. Modern Linguistics; Evolution and Scope

Modern linguistics as an academic discipline originated in the 19th century with the contributions of Ferdinand de Saussure, Leonard Bloomfield, and other notable figures who established the foundations of structural linguistics. During the early 20th century, scholars began to redirect their focus towards the observation that language change is not the only the aspect subject to

systematic patterns, but that language structure itself also adheres to regular norms and principles, Nur Ahamad Qazi. (2022). The focus of linguists worldwide increasingly shifted towards the examination of grammar, specifically referring to the systematic arrangement of a language's sound system and the internal composition of its words and sentences. This notable advancement in the field of linguistics is known as 'structural linguistics' (Cukier et al., 2002; Gosmanovna et al., 2019; Inoue, 2006). The perspectives advanced by eminent Swiss linguist Ferdinand de Saussure had a significant impact on this curriculum. Haugen (1951), said that this time period marked a departure from prescriptive approaches and the beginning of descriptive linguistics. Consequently, the profession started using complicated methods to look at grammar. Makhramovna (2022) said that this time period saw a greater emphasis on the academic study of languages that had not yet been written down. A significant paradigm shift in the study of language occurred around the turn of the 20th century. According to Noam Chomsky's basic claim in the field of generative grammar, the human cognitive system already has a universal grammar that acts as the conceptual framework for all language systems (Jumaniyozova, 2023; Lee et al., 2016). Diachronic analysis, which deals with the historical component as well as the complex cognitive processes that underpin the creation and understanding of language, has effectively attracted attention of the researchers in the field of language education.

Incorporating viewpoints from other disciplines like psychology, cognitive science, anthropology, computer science, and neuroscience, contemporary linguistics is now defined by the adoption of a multidisciplinary approach. However, by examining language within broader frameworks, such as psycholinguistics, cognitive linguistics, sociolinguistics, and computational linguistics, among others, this adoption of an interdisciplinary approach has improved the discipline (Liu, 2004; Newmeyer, 1988; Norton & Pavlenko, 2004). The study of contemporary linguistics has actively tackled issues relating to language and identity in the linked, global world of today. Researchers like Siregar (2022), Bromham et al. (2022), Corson (2000), Kuo & Lai (2006), among others, have looked into the relationship between language and both individual and collective identities, emphasizing the importance of linguistic diversity, language rights, and the preservation of cultural heritage.

2.2. Artificial intelligence (AI) and Technology Reforms in Linguistics

The discipline of linguistics has experienced a significant transformation, driven by the continuous progress of technology and the emergence of artificial intelligence (AI) as a powerful entity within the domain of language research. However, the convergence of linguistics and technology, facilitated by the advancements in artificial intelligence (AI), has resulted in a vibrant and progressive field of study. This interdisciplinary domain has reshaped conventional limitations, enhanced research capacities, and transformed our comprehension and interaction with language (Schmitt & Celce-Mureik, 2019; Swarm, 2003; Seuren, 2009).

According to Lenci (2020), the historical connection between artificial intelligence (AI) and linguistics can be traced to Noam Chomsky's transformational-generative grammar. Chomsky's transformational-generative grammar offered a systematic and rule-based method for the analysis and description of the underlying structure inherent in languages. It further presents the concepts of ‘surface structure’ and ‘deep structure’. Whilst surface structure represents order of words in a sentence, deep structure entails the conceptualization of sentence meaning. Pullum

(2009), claimed that artificial intelligence (AI) researchers who were driven by the ambition to develop computational systems endowed with the capacity to comprehend and produce human language regarded the rules associated with this grammar as a model for the computational processing and generation of human language. The convergence of linguistics and artificial intelligence (AI) has led to the emergence of a specialized area of study known as computational linguistics. Within this field, scholars utilize the computational capacities of computers to automate the process of linguistic analysis, construct tools for natural language processing (NLP), and generate language technologies that enhance human communication. The collaboration across these fields has resulted in advancements in machine translation, sentiment analysis, and voice recognition, radically transforming linguistic interactions.

Another major revolution in linguistics is the emergence of corpus linguistics. McEnery & Hardie (2013), maintained that with the aid of AI, scholars possess the capacity to amass, retain, and scrutinize extensive collections of linguistic data, spanning a wide range of mediums such as written literature, oral discourse, and even communication that incorporates multiple modes of expression. These vast and comprehensive datasets offer linguists with invaluable resources to explore and analyze linguistic phenomena across a wide range of languages, dialects, and historical periods.

Currently, methods of teaching and learning language have significantly changed as some AI tools are utilized to facilitate language teaching and learning. Students now use AI tools such as goggle translate to learn any language of their choice, Pokrivcakova (2019). On the other hand, AI has provided language educators with a wide range of tools such as interactive whiteboards, online language learning platforms, and video conferencing technologies which can be utilized to enhance their teaching approaches.

2.3. Gender and Technological Adoption in Language Settings

In terms of adoption of AI tools in language setting, gender proves to be one of the factors that determine the application of these tools in language setting. According to European Institute for Gender Equality. (2020), the examination of gender in connection with the use of technology exposes a longstanding power imbalance between females and males. While some studies (Lenci, 2020; Pokrivcakova, 2019) claim that gender differences in the utilization of technologies is as a result of financial assets and skills. Other scholars such as, (Yilmaz & Ünlü, 2022; Avery et al. 2023), claimed that perceptions and preferences are the main instigators for the use of technological aids in language education. According to Yilmaz & Ünlü, (2022), several studies have shown that there may be a gender-based preference when it comes to the usage of language learning apps and voice-controlled digital assistants for language-related activities. It has been suggested that women tend to exhibit a greater inclination towards using language learning apps, whilst men may demonstrate a preference for employing voice-controlled digital assistants in such contexts.

The perceptions and interactions of humans with technology in language acquisition and communication have also been influenced by stereotypes about technical ability and interests. According to Brown et al. (2010), gender norms to allocate distinct roles and establish certain expectations in relation to technology are determined by an individual's gender. Across several

societies, there has been a prevailing tendency to promote men's engagement in technology-oriented professions and pursuits, such as computer programming or engineering, whereas women have often been directed towards positions that are commonly associated with domesticity or care giving. Additionally, common societal stereotypes can also instigate gender disparity in technology usage, (Al-Fahad, 2009). For instance, the notion that males possess an inherent aptitude for technology, logic, and a predisposition towards (STEM), science, technology, engineering, and mathematics disciplines, while females are often portrayed as being less skilled oriented towards technology. From the empirical point of view, a study by the European Institute for Gender Equality (2020), maintained that women tend to exhibit a higher level of anxiety and have more unfavorable sentiments towards digital technology, particularly in relation to the influence of digitalization and automation on their everyday lives. As such, a higher proportion of men as compared to women perceive newer digital technologies as having a favorable influence on human activities.

2.4. Gap in the Literature

Existing research on the integration of Artificial Intelligence (AI) in modern linguistics has mostly focused on how technological tools have facilitated language education. Additionally, some of these studies have also paid attention on gender disparity on the utilization of these tools. Nevertheless, there is a significant lack of studies that have explored the perceptions of language educators; specifically, senior lecturers on AI in contemporary linguistics. With regard to this identified gap, the current research hinges on exploring gender variation in the responses of these lecturers about technological innovations brought in by the integration of AI in modern linguistics.

3. Research Hypothesis

The two hypotheses developed to guide the aim of this study are as follows.

i). There is a correlation between gender variation and responses of senior lecturers on AI integration in modern linguistics.

ii). There is a statistically significant difference between the male and female senior lecturers' responses on the technological innovations in modern linguistics.

4. Research Methodology

4.1. Research Approach

The study made use of a quantitative approach to investigate responses of male and female senior lecturers on AI in modern linguistics. Furthermore, an online questionnaire was utilized to gather the respondents' perspectives on the research's subject matter.

4.2. Study Sample

The study sample includes forty-six (46) females and thirty-seven (37) males who are currently senior lecturers. These participants, were however, randomly selected from various online platforms. Nevertheless, the basis of their selection was based on the number of their years of experience and their academic ranks. Additionally, it is important to acknowledge that there was a significant variation in the distribution of demographic factors, such as gender, age, and years of experience among the participants. Moreover, information consent was duly obtained from the participants before collection of data.

Table 1. Demographic Variables

Category	Variable	Frequency	Percentage
Gender	Female	46	55.42
	Male	37	44.58
Age	Less than 40years	22	26.51
	41-50years	18	21.69
	51-60years	25	30.12
	61-70years	9	10.84
	71+ above	9	10.84
Years of Experience	Less than 5years	15	18.07
	5-10years	19	22.89
	11-20years	31	37.35
	More than 20years	18	21.69
Academic Rank	Assistant Professor	28	33.73
	Associate Professor	31	37.35
	Full Professor	24	28.92

4.3. Data Collection Procedure

The data for the present research was obtained via a questionnaire that was electronically delivered to the research participants. Meanwhile, the said questionnaire has two primary sections, which include the demographic information of the research participants and the research's hypotheses, comprising of several survey items. Nevertheless, the second part of the questionnaire is further subcategorized into two parts. The first part contains the first research hypothesis; including five survey items, while the second part contains the second hypothesis, including the five developed survey items. Apart from the demographic data, all the questions were formulated on a 5-point Likert scale.

4.4. Data Analysis Procedure

The research data which were obtained from the responses of the respondents were analyzed using different several statistical techniques, such as computation of frequencies, percentages, mean, and standard deviation. In order to verify the proposed hypotheses, a t-test analysis was performed. Additionally, tables presenting descriptive statistics were included to offer a concise summary of the obtained data. The primary objective of these tables is to display the data in a manner that is both logical and concise, to facilitate comprehension and interpretation of the findings.

4.5. Data Presentation and Analysis

The section presents the research's data using descriptive statistics tables. Also, table for each hypothesis was presented incorporating t-test analysis. On the other hand, the question items were arranged based on the gender of each participant.

A). H1: There is a correlation between gender variation and responses of senior lecturers on AI integration in modern linguistics.

The survey items contained in this hypothesis include.

i. Are the linguistic activities better handled with the use of AI tools?

ii. Can the incorporation of AI in modern linguistics create a challenge in the field of linguistics?

iii. Do you adapt easily with newly introduced AI-language driven tools in your teaching or research in linguistics?

iv. Do you think that gender influences the level of utilization of AI tools in linguistic activity?

v. Male lecturers have better advantage of utilizing AI tools than female lecturers.

Table 2. Responses of Male Senior Lecturers on AI Integration in Modern Linguistics.

Survey Items	SA	A	N	SD	D	Mean	St.D	Standard Error
Q1	27.03	16.22	24.32	13.51	18.92	3.87	1.62	0.27
Q2	21.62	16.22	24.32	18.92	18.92	3.73	2.07	0.34
Q3	24.32	21.62	18.92	16.22	18.92	3.84	2.04	0.34
Q4	21.62	27.03	27.03	10.81	13.51	3.70	3.89	0.64
Q5	24.32	21.62	16.22	18.92	18.92	3.78	2.09	0.34

"SA= Strongly Agree"; "A=Agree"; "N=Neutral"; "SD=Strongly Disagree"; "D= Disagree"; "St.D=Standard Deviation"

Table 3. Responses of Female Senior Lecturers on AI Integration in Modern Linguistics

Survey Items	SA	A	N	SD	D	Mean	St.D	Standard Error
Q1	32.61	19.57	21.73	17.39	8.70	3.93	1.53	0.23
Q2	26.09	13.04	28.26	19.57	13.04	3.57	2.93	0.43
Q3	10.87	21.74	23.91	26.09	17.39	3.13	2.99	0.44
Q4	28.26	19.57	30.43	15.22	6.52	3.50	2.91	0.43
Q5	21.74	19.57	23.91	15.21	19.57	3.20	3.01	0.44

The two tables above represent the responses of male and female senior lecturers on AI integration in modern linguistics. However, the summary of the findings of these table are provided below.

i). Both the male and female participants shared positive agreement in regard to the efficiency of AI technologies in handling linguistic activities. This is evident in the high mean score of the males which is 3.87, and that of the females, which is 3.70. However, the observed disparity in

averages between the two groups is minimal, and the standard deviations reveal no statistically significant difference in answers between males and females.

ii). The two genders also acknowledged that AI in modern linguistics poses possible issues in the field of linguistics. there is a minimal disparity in responses, on the basis of the mean of both female and male participants, which is about 3.65, it can be said that the participants do not exhibit a significant inclination towards either agreement or disagreement on the potential issues in linguistics posed by artificial intelligence (AI). Furthermore, the lack of significance in the gender-based variation in replies suggests a common viewpoint held by both male and female participants.

iii). The findings in the third survey item indicate the presence of a gender-based disparity in the capacity of participants to adapt to recently release AI-driven technologies within the field of linguistics. However, on average, male participants exhibit a greater degree of flexibility towards newly introduced AI-driven products in comparison to their female counterparts. Meanwhile, the aggregate average of about 3.49 indicates a significant level of agreement among participants regarding their ability to adapt to newly introduced AI-driven solutions. However, it is worth noting that there is a noticeable disparity in mean scores between male and female respondents.

iv). For the fourth item, both male and female participants exhibit a moderate degree of agreement about the role of gender on the use of AI technologies in language activities. Nevertheless, the collective mean of about 3.60 indicates that, overall, participants hold the belief that gender plays a significant role in the utilization of AI technologies in linguistics, but with a moderate level of agreement, and relatively, no discernible disparity in replies based on gender for this question/item. This also suggests that individuals of both genders have a comparable viewpoint on the impact of gender on the use of AI tools in the field of linguistics.

v). In the fifth item, both genders exhibit a modest amount of agreement with the perceived advantage that male lecturers possess in using AI techniques in the field of linguistics, as opposed to their female counterparts. This is evident in the combined means which is about 3.49. This finding indicates that participants, irrespective of their gender, exhibit a reasonable degree of consensus about the potential benefits that male lecturers may possess in incorporating AI techniques within the field of linguistics. Nevertheless, the disparity in averages seen between male and female participants suggests that gender plays a significant role in shaping this perspective, as male individuals tend to exhibit somewhat higher levels of agreement.

B). H2: There is a statistically significant difference between the male senior lecturers and female senior lecturers' responses on the technological innovations in modern linguistics.

The survey items in this hypothesis are listed as below.

i). Do you frequently use AI tools in your teaching?

ii). Have your teaching experiences improved while using AI tools in teaching language related courses?

iii). Can many innovations in the field of linguistics be attributed to the presence of AI tools in the field?

iv). Do the individuals who use AI tools in the field of linguistics face ethical challenges?

v). Are the AI tools more beneficial in terms of improved efficiency and automation than accessibility and inclusivity?

Table 4. Responses of Male Senior Lecturers on AI Integration in Modern Linguistics

Survey Items	SA	A	N	SD	D	Mean	St.D	Standard Error
Q1	24.32	32.43	13.52	16.22	13.51	3.00	0.77	0.14
Q2	28.26	19.57	30.43	15.22	6.52	3.06	0.87	0.16
Q3	18.92	21.62	16.22	24.32	18.92	2.77	2.97	0.54
Q4	10.81	18.92	24.32	27.03	18.92	2.51	1.59	0.29
Q5	16.60	13.38	10.56	24.32	35.14	2.12	1.97	0.93

Table 5. Responses of Female Senior Lecturers on AI Integration in Modern Linguistics.

Survey Items	SA	A	N	SD	D	Mean	St.D	Standard Error
Q1	10.87	23.91	21.74	26.09	17.39	2.57	1.72	0.25
Q2	26.09	13.04	28.26	19.57	3.04	2.38	1.69	0.25
Q3	10.87	21.74	23.91	26.09	17.39	2.50	1.79	0.26
Q4	28.26	30.43	19.57	15.22	6.52	3.07	1.26	0.18
Q5	21.74	23.91	21.74	15.21	19.57	2.52	1.73	0.25

The above tables (4 and 5) represent the responses of the both the male and the female participants of the present study. However, the findings of these tables are summarized below.

i). In the first item, the mean score for the responses of the male participants is 3.00; indicating higher mean score, while that of the females is 2.57, indicating a somewhat lower mean score as compared to their male counterparts. The replies provided by the female participants are positioned in greater proximity to the "Neutral" end of the Likert scale, but still within the range of agreement. This finding indicates that male participants, on average, had a greater tendency to use AI technologies in their teaching as opposed to female participants. Nevertheless, it is worth noting that both genders tended to submit answers falling within the "Agree" category on the Likert scale, so suggesting a prevailing consensus about the regular use of artificial intelligence (AI) tools.

ii). In the findings in the second survey item on average, male participants express a certain level of agreement on the enhancement of their teaching experiences when using AI techniques. This is evident in the mean scores of the responses of both genders. While the male participants exhibited an average score of 3.06, indicating a position between "Agree" and "Neutral" on the Likert scale. The average score supplied by female participants was 2.38, which is significantly lower than the average score reported by male participants. The replies of female participants are positioned in closer proximity to the "Neutral" end of the Likert scale, indicating a degree of agreement but at a lower level. This finding indicates a significant disparity between genders in the perception of the influence of artificial intelligence (AI) technologies on teaching experiences. Although there is a general consensus among both groups, male participants, on average, exhibited a greater degree of agreement with the statement, suggesting a more favorable impression of the influence of AI tools on educational experiences.

iii). In the third item, the male participants exhibited an average score of 2.77, indicating a "Neutral" response on the Likert scale. This finding suggests that, on average, male participants exhibit a neutral stance towards the statement, showing neither significant agreement nor disagreement. Their perspective on the attribution of advancements in linguistics to the use of AI technologies is characterized by a reasonably impartial position. However, the mean score of female participants was 2.50, on average, which was somewhat lower than the mean score of male participants. Additionally, the replies of the female participants are situated within the "Neutral" range on the Likert scale, suggesting a comparable level of neutrality towards the statement. Conclusively, participants of both genders exhibited a neutral perspective when it came to attributing breakthroughs in the area of linguistics to the use of artificial intelligence (AI) tools.

iv). For the fourth item, the male participants exhibited mostly a neutral perspective towards the existence of ethical challenges faced by linguists using AI technologies. This is evident in the mean score of their responses which is 2.51. However, the average score responses of the female participants was 3.07, which is significantly higher than the average score obtained by male participants. The replies of the female participants are situated within the "Agree" category on the Likert scale, suggesting a modest degree of concurrence with the statement. This suggests that females tend to be more inclined towards endorsing the notion that professionals in the area of linguistics who use artificial intelligence (AI) techniques encountering ethical problems.

v). Lastly, the male participants, on average, exhibited a mean score of 2.12, indicating that, on average, male participants exhibit a tendency towards the "Disagree" end of the Likert scale. However, the calculated mean value of 2.52 indicates that, on average, female participants exhibit a tendency towards agreement on the Likert scale. This finding provides further support for the viewpoint that female participants generally agree with the statement that AI technologies provide more advantages in terms of efficiency and automation within the field of linguistics, as opposed to their contributions towards accessibility and inclusion. However, it is worth noting that a subset of participants expressed a neutral perspective on this matter.

Table 6. Result of the T-test Analysis

Hypothesis	T-values	Degree of freedom	P-values	Results
H1				
Q1	0.24	81	0.81	Not significant
Q2	0.23	81	0.82	Not significant
Q3	1.49	81	0.14	Not significant
Q4	0.39	81	0.70	Not significant
Q5	1.29	81	0.20	Not significant
H2				
Q1	-10.05	81	<0.001	Significant
Q2	1.45	81	0.003	Not significant
Q3	-6.05	81	<0.001	Significant
Q4	-1.43	81	0.003	Not significant
Q5	-9.32	81	<0.001	Significant

For the first hypothesis, above t-test analysis provides empirical evidence that there is no statistically significant disparity in the replies of male and female senior lecturers with respect to the integration of artificial intelligence (AI) techniques in the field of contemporary linguistics.

However, this conclusion is drawn based on the observation that all computed p-values fall below the set value of significance of 0.05, indicating a lack of statistical significance. Meanwhile, the Hypothesis 2 (H2) posits that there exist notable gender disparities in the views of artificial intelligence (AI) tools within some domains of contemporary linguistics. Specifically, substantial variations are seen in items i), iii), and v), (Significant - S), whereas items ii) and iv) exhibit no statistically significant differences (Not Significant - NS).

Although there are no significant differences regarding the perceptions of both male and female lecturers on the integration of AI in modern linguistics, there are some aspects specific to modern linguistics with observable gender variations in responses of the participants. Such aspect includes teaching, frequency in usage and ethical challenges. Also, while female lecturers address the AI integration in modern linguistics from ethical and beneficial point of view, the male counterparts focused more on accessibility and inclusivity.

5. Discussion

The findings of this research highlight the importance of AI in modern linguistics. Nevertheless, with the presence of AI in the field of linguistics, individuals in the field have their distinct perceptions on technologies. However, these individuals' perceptions can also be narrowed down to perceptions based on gender. In other words, individuals who are female by gender may have similar perception on AI-driven language tools, which is also applicable to their male counterparts, as observed in the current research.

Meanwhile, the current research focused on examining the responses of senior lecturers on the integration of AI in modern linguistics. The research objectives further centered on gender variation in the responses of these lecturers regarding technological innovations brought in by the integration of AI in modern linguistics. Nevertheless, the choice of senior lecturers for this research assumes that they already possess substantial knowledge and skill in the subject. Hence, rendering their opinions is very important for comprehending the influence of artificial intelligence (AI) on the domains of linguistic education and research.

Furthermore, the research analysis was based on two research hypotheses, which include, 'there is a correlation between gender variation and responses of senior lecturers on AI integration in modern linguistics', and 'there is a statistically significant difference between the male senior lecturers' and female senior lecturers' responses on the technological innovations in modern linguistics'.

Based on the findings generated from the survey items in the first hypothesis, both the male and female participants shared positive agreement in regard to the efficiency of AI technologies in handling linguistic activities. As submitted by Hilao & Wichadee (2017), both male and female genders share similar assumption on the benefits of AI technologies. They further provided evidence for the absence of gender disparity with regard to the benefits of AI. One of the pieces of evidence is the facilitation of linguistic activities (language learning). With some renowned technologies learning language or engaging in any linguistic activities is made easier with or without the assistance of language instructors, Schmid (2008).

An observed area of gender disparity in the first analysis is ‘easy adaption of newly introduced AI technology’. However, the findings revealed that the male participants easily adapt to new technologies as compared to their female counterparts. One salient element that may contribute to the disparity might be the participants' preexisting experience and exposure to technology. According to European Institute for Gender Equality, (2020), males may have had greater levels of technical exposure, including personal engagement with gadgets, software, or devices throughout their formative years, hence fostering a greater sense of ease in embracing new technological tools.

Meanwhile, the second hypothesis focused on technological innovations in linguistics. However, both genders acknowledged the relevance of using AI tools in improving their teaching experiences. Two areas that were there are, “gender disparity and ethical challenges” and “the level of the benefits of AI tools”. The findings revealed that females are more concerned on the ethical issues associated with using AI tools than males. These issues are privacy, job displacement, and societal stereotype. From the findings of Avery et al. (2023), women may undergo socialization from a young age that promotes the development of heightened empathy and consideration, resulting in a heightened emphasis on ethical considerations. However, this socialization processes often prioritizes the cultivation of empathy, compassion, and a genuine regard for the welfare of others.

On the other hand, the gender disparity on the level of the benefits of AI in the field of linguistics, as observed from the research’s analysis is centered on improved efficiency and automation as opposed to accessibility and inclusivity. From the pragmatic point of view, the possible reason why the male participants prioritize on the accessibility and inclusivity of AI tools can be attributed to social, cultural, and individual factors. While societal norms and expectations from both genders shape their preferences. Al-Fahad (2009), admits, differences in the adoption and familiarity with technology may also influence individuals' perspectives. Individuals who identify as male and have had favorable encounters with artificial intelligence (AI) tools that augment accessibility and inclusiveness may exhibit a greater inclination towards endorsing these dimensions. Conversely, individuals who identify as female and have observed AI technologies enhancing efficiency may prioritize this element.

6. Conclusion

The integration of Artificial Intelligence (AI) into the field of modern linguistics represents a substantial and transformative shift in the field of linguistics. With the presence of artificial intelligence (AI) in contemporary linguistic, researchers are provided with new ways of exploring language in a more extensive and complex manner. While it is important to understand the opinions of individuals on the integration of AI in modern linguistics, this research explored the responses of both male and female senior lectures to ascertain variations on how they perceive AI in the field. Although there exists lack of substantial disparities in gender-based perspectives regarding the incorporation of artificial intelligence (AI) in contemporary linguistics, certain facets within this domain do manifest discernible gender variations. The observed discrepancies can be ascribed to a convergence of societal, occupational, and personal

determinants. The comprehension of these factors can enlighten the implementation of more comprehensive methodologies in the realm of technological assimilation and pedagogy within the field of modern linguistics.

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