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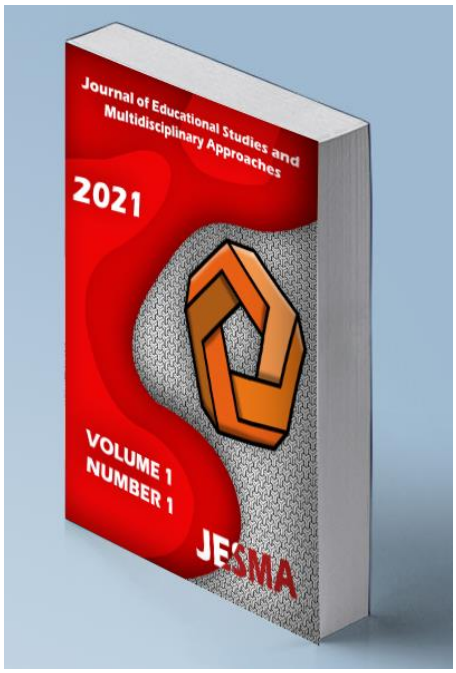

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Goal Orientation as a Predictor of Perceived Physical Literacy Among Fitness Participants: Application of Achievement Goal Theory

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Goal Orientation as a Predictor of Perceived Physical Literacy Among Fitness Participants: Application of Achievement Goal Theory

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ABSTRACT (Times New Roman typeface and 10 points)

This study investigates the relationship between exercise goal orientation and perceived physical literacy among fitness center members, grounded in the Achievement Goal Theory. This study posits that goal orientation significantly influences how individuals engage in fitness activities, thus impacting their intrinsic motivation and physical literacy. Using a cross-sectional design, data were collected from 393 participants via an online survey that assessed their goal orientation and perceived physical literacy. Statistical analyses included the normality test, independent sample t-test, analysis of variance (ANOVA), and regression analysis. The findings indicate that mastery-oriented goals, which focus on personal growth and competence, are significant predictors of higher perceived physical literacy than performance-oriented goals that emphasize external validation. The study also identified notable demographic differences: younger individuals and those who frequently exercise exhibit stronger mastery orientations and higher levels of perceived physical literacy. Specifically, younger participants (18-24 years) reported higher confidence and knowledge in physical literacy than older participants (35 and above). Additionally, males score higher on the perceived knowledge component of physical literacy than females. Frequent exercisers (4 or more times per week) demonstrate higher levels of both goal orientation and perceived physical literacy. These insights underscore the need for tailored interventions that promote mastery goals while fostering lifelong engagement in physical activities. By bridging existing research gaps, this study contributes to the development of more effective fitness programs that enhance health and well-being through personalized approaches that account for individual differences in motivation and literacy.

Keywords: Exercise, goal orientation, leisure, physical literacy, recreation

Introduction

The increasing number of fitness centers highlights the growing interest in health and physical well-being, emphasizing the importance of understanding the factors that contribute to successful exercise adherence and outcomes. Within this context, goal orientation has emerged as a crucial element that influences individuals' fitness routines. Goal orientation refers to the framework within which individuals set their exercise objectives, focusing either on personal improvement and mastery or on external validation and comparison with others (Klain et al., 2014). This study explores the predictive power of exercise goal orientation on perceived physical literacy among fitness center members. This topic integrates psychological and physiological perspectives to enhance the understanding of exercise behaviors and their outcomes. Physical literacy is defined as the ability to move with competence and confidence in a wide variety of physical activities that benefit the healthy development of the individual. This involves understanding and appreciating the significance of physical activity and its contributions to a healthy lifestyle (Edwards et al., 2016).

The need for this study arises from a limited understanding of how goal orientation influences perceived physical literacy, which is crucial for developing effective interventions in fitness settings. Previous research has primarily focused on the direct effects of goal orientation on exercise adherence and motivation (Cid et al., 2020; Moreno et al., 2010). However, the relationship between these motivational constructs and the concept of physical literacy, which encompasses an individual's understanding and awareness of their body's needs, capabilities, and signals (Edwards et al., 2016), remains underexplored. Physical literacy is essential for promoting long-term health and well-being because it encourages individuals to engage in physical activities that are not only effective but also sustainable and enjoyable (Teixeira et al., 2012). By investigating this relationship, the current study seeks to fill this gap in the literature and provide insights that could inform the design of personalized fitness programs.

Current trends in the fitness industry underscore the relevance of this study. There is a growing shift from traditional fitness paradigms, which emphasize physical appearance and performance, to a more holistic approach that values health, well-being, and body awareness (Raaijmakers et al., 2015). This trend is driven by a broader societal movement toward mindfulness and self-compassion, encouraging individuals to develop a deeper connection with their bodies and exercise in a way that aligns with their personal values and goals (Ebbeck & Austin, 2018). Furthermore, technological advancements have facilitated the personalization of fitness programs, allowing individuals to set and track goals tailored to their specific needs and preferences. This personalized approach is aligned with the principles of goal orientation and physical literacy as it empowers individuals to take control of their health and fitness journeys.

The variables' goal orientation and physical literacy were selected due to their potential impact on exercise adherence and overall fitness experience. Goal orientation influences how individuals perceive success and failure in their fitness endeavors, which in turn affects their motivation and engagement levels (Lower et al., 2014). Physical literacy, on the other hand, enhances individuals' ability to interpret their body signals and make informed decisions about their health and fitness routines (Brown et al., 2017). The specific research problem addressed in this study is the extent to which goal orientation can predict perceived physical literacy among fitness center members. The problem statement guiding this research is: "To what extent does exercise goal orientation predict perceived physical literacy among fitness center members?" By addressing this issue, this study aims to provide actionable insights that can enhance the design of fitness programs and interventions, ultimately supporting individuals in achieving health and fitness goals.

Literature Review

The exploration of goal orientation in exercise and its relationship with perceived physical literacy is a burgeoning area of interest (Cornish et al., 2020; Li et al., 2021), yet there are notable research gaps that this study aims to address. One significant gap is the lack of comprehensive studies examining how demographic factors such as gender, age, exercise frequency, and session duration impact goal orientation and physical literacy. Current literature has predominantly focused on individual variables in isolation rather than integrating them into a holistic framework that considers how these factors

collectively influence the development of physical literacy in fitness center members (Jean de Dieu & Zhou, 2021; Liu et al., 2017). Additionally, while substantial evidence exists on the influence of goal orientation on motivation and engagement in educational settings (Miller et al., 2021; Yi & Huebner, 2020), less is known about its predictive power concerning physical literacy in adult fitness environments. This study intends to fill these gaps by examining the interplay between these demographic factors and their combined effects on the development of physical literacy, thereby offering a more nuanced understanding of how these elements interact to foster lifelong engagement in physical activity.

The theoretical framework guiding this study is anchored in the Achievement Goal Theory, which delineates that individuals are motivated by mastery and performance goals (Elliott & Dweck, 1988). Mastery goals, which emphasize personal improvement and competence, enhance physical literacy by fostering intrinsic motivation and self-efficacy (Morgan, 2019). In contrast, performance goals that focus on outperforming others (Poortvliet & Darnon, 2010) may not contribute to the same extent toward the development of physical literacy (Edwards et al., 2016). This study hypothesizes that demographic factors modulate the relationship between goal orientation and physical literacy and that goal orientation exerts a direct influence on physical literacy. The hypotheses are formulated to explore these dynamics in depth, with each hypothesis addressing a specific demographic variable to ascertain its role in shaping the relationship between goal orientation and physical literacy.

Existing literature suggests that gender may play a significant role in shaping exercise goal orientation (Guan et al., 2022) and perceived physical literacy (Li et al., 2020). Studies have consistently demonstrated that gender differences influence motivational constructs, with males typically displaying a higher inclination toward performance goals and females leaning more toward mastery goals (Theis & Fischer, 2017). These differences could impact physical literacy and affect how individuals engage in physical activities. Research indicates that females are often more focused on personal growth and intrinsic motivation, whereas males may prioritize competition and external validation (Tomczak et al., 2021). Understanding these dynamics can inform the development of gender-specific interventions that cater to the unique needs and preferences of each gender and promote more effective engagement in physical activities. Thus, the following hypothesis is proposed: H^1. *Exercise goal orientation and perceived physical literacy significantly differ by gender*.

Research has revealed that younger individuals are often more engaged in mastery-oriented activities, focusing on personal development and skill acquisition (Rubtsov & Ulanovskaya, 2020). In contrast, older adults may prioritize performance-related outcomes, such as achievement of specific fitness goals or competition with peers (Choi et al., 2018). These age-related differences in motivational dynamics can impact physical literacy, influencing how individuals perceive and engage in physical activities over time. Understanding these variations is crucial for designing age-appropriate interventions that encourage sustained physical activity and literacy throughout life. Tailoring fitness programs to cater to the changing motivations and needs of different age groups can enhance engagement and promote lifelong physical literacy. Thus, the following hypothesis is proposed: H^2. *Exercise goal orientation and perceived physical literacy significantly differ by age*.

Regular exercise engagement has been linked to enhanced mastery orientation and higher levels of physical literacy, as individuals who consistently participate in physical activities are more likely to develop intrinsic motivation and competence (Sum et al., 2016). This relationship underscores the importance of regular physical activity for fostering positive motivation and developing physical literacy. Frequent exercisers tend to demonstrate stronger mastery orientation (Liu et al., 2019), which, in turn, enhances their physical literacy and overall engagement with exercise. Encouraging consistent participation in physical activities through structured programs and supportive environments can promote mastery-oriented goals and foster lifelong physical literacy. Thus, the following hypothesis is proposed: H^3. *Exercise goal orientation and perceived physical literacy differ significantly according to weekly exercise frequency*.

The relationship between exercise goal orientation and perceived physical literacy is crucial for understanding how individuals develop the skills and motivation necessary for lifelong engagement in

physical activities (Choi et al., 2020; Rudd et al., 2020). Goal orientation, particularly mastery-oriented goals, is a significant predictor of physical literacy. Individuals with a higher mastery orientation are more likely to exhibit intrinsic motivation, competence, and confidence, which are essential components of physical literacy (Liu et al., 2017). This relationship highlights the importance of fostering mastery-oriented goals within fitness environments to promote physical literacy and encourage sustained participation in physical activities. Understanding the predictive power of goal orientation on physical literacy can inform the development of targeted interventions that prioritize mastery over performance-oriented goals, ultimately enhancing physical literacy and promoting lifelong physical activity. Therefore, the following hypothesis is proposed: *H^4: Exercise goal orientation has a predictive effect on perceived physical literacy*.

The literature on goal orientation and physical literacy has revealed several key trends and patterns. Mastery-oriented climates, both in educational and fitness settings, are consistently linked to higher levels of intrinsic motivation, engagement, and physical literacy (Pulkka, 2016). These environments foster a supportive context where individuals are encouraged to pursue personal growth and competence, leading to more positive outcomes in physical activity engagement. Furthermore, the literature underscores the importance of tailoring interventions to individual needs and demographic factors because these factors significantly influence the effectiveness of goal orientation and physical literacy initiatives (Ryan et al., 2019; Schapira et al., 2017). Despite these insights, several gaps remain in the literature, particularly concerning the integration of demographic variables into a cohesive model that explains the interplay between goal orientation and physical literacy. This study aims to address this gap by incorporating demographic variables into the analysis to provide a more comprehensive understanding of how these factors shape physical literacy. Moreover, a scarcity of research has specifically explored the predictive power of goal orientation on physical literacy in adult fitness contexts. Although educational settings have been the focus of much research (Liu et al., 2017; Roetert & MacDonald, 2015), there is a need to extend these findings to fitness centers, where adult populations engage in exercise with different motivational dynamics. This study contributes to the literature by investigating these relationships within the context of fitness centers, offering evidence-based recommendations for promoting physical literacy through targeted interventions that account for demographic differences.

In summary, the existing literature lacks comprehensive studies exploring the interaction between goal orientation, physical literacy, and demographic factors, such as gender, age, exercise frequency, and duration, among adult fitness populations. There is ample evidence supporting the positive effects of mastery orientation (Cid et al., 2020)., the integration of these variables into a unified model is necessary to fully understand their complex interactions. This study seeks to bridge these gaps by providing a holistic analysis of these dynamics, thereby informing the development of more effective interventions aimed at fostering physical literacy and lifelong engagement in physical activity.

Methods and Materials

Research Model

This study employed a quantitative research design, utilizing a cross-sectional approach to collect data from a diverse sample of individuals. A cross-sectional design involves collecting data at a single time point, which allows researchers to examine relationships between variables and provide a snapshot of current trends and associations among participants (Levin, 2006). This approach is particularly suited to the research objectives, which aim to understand the predictive power of exercise goal orientation on perceived physical literacy among fitness center members.

Data Collection

Data were collected using an online survey distributed via Facebook, Instagram, and WhatsApp. The survey was designed to gather information on the participants' exercise habits, goal orientation, and perceived physical literacy. Group administrators on these platforms were contacted to share the survey among fitness- and exercise-focused groups. Participants were informed about the study purpose and

provided with a link to complete the survey anonymously. This method ensured wide-ranging outreach and facilitated the participation of individuals from different regions of Türkiye.

Measurement instruments

Measurement of Goal Orientation in Exercise: The Goal Orientation in Exercise Measure (GOEM) assesses individuals' propensity to adopt tasks or ego goals within exercise contexts. The original version comprises 10 items divided into two subscales: task orientation and ego orientation. Participants responded to items on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree), with higher scores indicating stronger inclinations toward the respective orientation (Petherick & Markland, 2008). Turkish adaptation of the GOEM was undertaken to ensure cultural relevance and applicability. This version was validated in a study involving 408 regular exercisers aged 17–61 years. Exploratory factor analysis (EFA) revealed a two-factor structure, confirming the original model with task and ego orientations. Confirmatory factor analysis (CFA) further supported this structure, yielding fit indices such as $\chi 2/df = 1.83$, AGFI = .95, GFI = .97, CFI = .98, and RMSEA = .045. The internal consistency of the subscales was robust, with Cronbach's alpha values of .90 for ego orientation and .87 for task orientation, and a test-retest reliability coefficient of .88 for ego orientation and .87 for task orientation. The GOEM's convergent validity was demonstrated through its correlations with behavioral regulations, confirming its reliability and validity in the Turkish context (Ersöz et al., 2017).

Perceived Physical Literacy: The Perceived Physical Literacy Instrument (PPLI), originally constructed to evaluate physical education teachers' self-perceptions of physical literacy, comprises nine items across three factors: motivation, confidence, physical competence, and interaction with the environment. These items were assessed on a five-point Likert scale, with responses indicating levels of agreement from 1 (strongly disagree) to 5 (strongly agree) (Sum et al., 2016). The Turkish adaptation of the PPLI was conducted to evaluate its applicability and reliability in the Turkish educational context. In a study involving 218 physical education teachers, the CFA did not initially confirm the original structure. However, subsequent exploratory and confirmatory factor analyses resulted in a revised three-factor, nine-item structure that demonstrated a satisfactory fit, with fit indices surpassing reference values. The model explained 69.04% of the total variance, and the internal consistency, as indicated by a Cronbach's alpha of.81, confirmed its reliability and validity. This adaptation ensures the instrument's utility in assessing Turkish physical education teachers' physical literacy levels (Munusturlar & Yıldızer, 2020).

Sampling

The study population comprised individuals residing in different provinces of Turkey who regularly exercise and have been members of a fitness center for at least six months. A sample of 393 participants was selected using convenience sampling. Convenience sampling is a non-probability sampling method in which participants are selected based on their availability and willingness to participate in the study, making it an efficient way to collect data when time and resources are limited (Etikan, Musa, & Alkassim, 2016). This involves selecting individuals who are easily accessible, reachable, and willing to participate. This approach involved initially contacting the group administrators of relevant social media groups, who then distributed the survey to their members. The sample included 223 males and 170 females, ensuring a diverse representation.

Data Analysis

The collected data were analyzed using a range of statistical techniques to explore the relationships among variables. A frequency analysis was conducted to describe the demographic characteristics of the sample. Normality tests were performed to assess data distribution. Independent sample t-tests and ANOVA were used to investigate differences between groups based on demographic variables. Regression analysis was conducted to determine the predictive power of exercise goal orientation on perceived physical literacy. All statistical analyses were conducted using Jamovi software, which ensured accurate and reliable results.

Findings

This section summarizes the results of the statistical analyses used to investigate the links between demographic characteristics, exercise frequency, and perceived physical literacy. The analyses included frequency analysis to describe the participants' demographic characteristics, normality test to assess data distribution, independent sample t-test and ANOVA to investigate group differences, and regression analysis to determine the predictive power of exercise goal orientation on perceived physical literacy. The studies were performed using Jamovi software to ensure precision and reliability. The important conclusions from these analyses are as follows.

Descriptive Results

Table 1. Demographic Characteristics of the Sample Population

Variables	N	%
Gender		
Male	223	56.7%
Female	170	43.3%
Age		
18-24	210	53.4%
25-34	132	33.6%
35 and above	51	13.0%
Exercise Frequency		
1 time per week	53	13.5%
2 times per week	54	13.7%
3 times per week	120	30.5%
4 times per week	122	31.0%
5 times per week or more	44	11.2%

Table 1 provides an overview of the demographic characteristics of the sample population. The sample comprises 393 individuals, of which 223 were men (56.7%) and 170 were women (43.3%). The age distribution indicates that the majority of participants were between 18 and 24 years (53.4%), followed by those aged 25-34 years (33.6%) and those 35 years and older (13.0%). In terms of exercise frequency, most participants engaged in physical activity 3-4 times per week (61.5%), with a smaller proportion exercising 1-2 times (27.2%) or 5 or more times per week (11.2%). These demographics suggest that the young and active sample predominantly engage in regular exercise routines.

Normality Results

Table 2. Normality Distribution of the GOEM and PPLI Scales

Statistics	GOEM Task	GOEM Ego	GOEM Total	PPLI Confidence	PPLI Knowledge	PPLI Communication	PPLI Total
Mean	4.27	3.43	3.85	4.04	4.00	4.15	4.06
Standard deviation	0.777	0.987	0.727	0.855	0.876	0.802	0.713
Skewness	-1.83	-0.55	-1.01	-1.07	-0.911	-1.08	-0.997
Std. error skewness	0.123	0.123	0.123	0.123	0.123	0.123	0.123
Kurtosis	4.18	-0.194	1.81	1.30	0.387	1.22	1.31
Std. error kurtosis	0.246	0.246	0.246	0.246	0.246	0.246	0.246

Table 2. Normality distribution results suggest that some variables deviate significantly from a normal distribution, as indicated by skewness and kurtosis. According to Kline (2016), skewness values greater than ±3 and kurtosis values greater than ±10 indicate significant deviations from normality. In this analysis, the GOEM task scale had skewness and kurtosis values outside the range suggested by the Kline for normality, with skewness of -1.83 and kurtosis of 4.18, suggesting moderate non-normality. Despite these deviations, the skewness and kurtosis values did not exceed the thresholds for severe non-normality, implying that parametric tests can still be appropriate. It is generally recommended to apply

parametric tests when skewness is less than ±2 and kurtosis is less than ±7, indicating that the assumptions of normality are adequately met when conducting parametric analyses on these data.

Independent Samples T-Test Results

Table 3. Independent Samples T-Test Results for Gender Differences

Variables	Group (Gender)	N	Mean	Standart deviation	t	p
GOEM - Task	Male	223	4.30	0.724	1.021	0.308
	Female	170	4.22	0.841		
GOEM - Ego	Male	223	3.50	0.967	1.541	0.124
	Female	170	3.35	1.009		
GOEM Total	Male	223	3.90	0.699	1.594	0.112
	Female	170	3.78	0.758		
PPLI - Confidence	Male	223	4.11	0.806	1.889	0.060
	Female	170	3.95	0.91		
PPLI - Knowledge	Male	223	4.09	0.827	2.209	0.028
	Female	170	3.89	0.927		
PPLI - Communication	Male	223	4.13	0.797	-0.647	0.518
	Female	170	4.18	0.809		
PPLI Total	Male	223	4.11	0.677	1.412	0.159
	Female	170	4.01	0.756		

Note. H_a $\mu_{erkek} \neq \mu_{kadın}$

The independent sample t-test (Table 3) examined gender differences in various dimensions of goal orientation and perceived physical literacy. The results show no significant gender differences in the GOEM Task, GOEM Ego, or PPLI Total scores, with all p values exceeding 0.05. The only significant gender difference was observed in the PPLI Knowledge Scale, where males scored higher (mean = 4.09) than females (mean = 3.89), t(391) = 2.209, p = 0.028. This suggests that although gender does not significantly influence most dimensions of goal orientation and perceived physical literacy, males may perceive themselves as having more knowledge about physical literacy than females.

ANOVA Results

Table 4. ANOVA Results for Age Differences in Goal Orientation and Perceived Physical Literacy

Variables	Group (Age)	*N*	Mean	Sd	*F*	*p*	Sig.
GOEM - Task	(1) 18-24	210	4.34	0.704			
	(2) 25-34	132	4.25	0.81	2.33	0.102	
	(3) 35 and above	51	4.05	0.933			
GOEM - Ego	(1) 18-24	210	3.41	0.965			
	(2) 25-34	132	3.53	0.995	1.24	0.292	
	(3) 35 and above	51	3.28	1.044			
GOEM Total	(1) 18-24	210	3.87	0.677			
	(2) 25-34	132	3.89	0.752	1.51	0.224	
	(3) 35 and above	51	3.66	0.836			
PPLI - Confidence	(1) 18-24	210	4.1	0.816			
	(2) 25-34	132	4.08	0.895	5.35	0.006	3 - 1,2
	(3) 35 and above	51	3.68	0.841			
PPLI - Knowledge	(1) 18-24	210	3.99	0.873	6.76	0.002	3 - 1,2
	(2) 25-34	132	4.17	0.818			

Table 4. ANOVA Results for Age Differences in Goal Orientation and Perceived Physical Literacy

Variables	Group (Age)	*N*	Mean	Sd	*F*	*p*	Sig.
	(3) 35 and above	51	3.63	0.928			
PPLI - Communication	(1) 18-24	210	4.2	0.746			
	(2) 25-34	132	4.14	0.815	1.3	0.276	
	(3) 35 and above	51	3.97	0.964			
PPLI Total	(1) 18-24	210	4.1	0.663			
	(2) 25-34	132	4.13	0.734	4.51	0.013	3 - 1,2
	(3) 35 and above	51	3.76	0.793			

Table 5. ANOVA Results for Exercise Frequency in Goal Orientation and Perceived Physical Literacy

Variables	Group (Exercise Frequency)	*N*	Mean	Sd	*F*	*p*	Sig.
GOEM - Task	(1) One per week	53	3.98	0.763			
	(2) 2 times per week	54	4.04	0.77			
	(3) 3 times per week	120	4.26	0.801	5.23	< 0.001	5,4 - 1,2
	(4) 4 times per week	122	4.44	0.754			
	(5) 5 times per week or more	44	4.44	0.649			
GOEM - Ego	(1) One per week	53	3.15	0.959			
	(2) 2 times per week	54	3.25	0.825			
	(3) 3 times per week	120	3.54	1.002	2.48	0.066	
	(4) 4 times per week	122	3.55	1.006			
	(5) 5 times per week or more	44	3.4	1.042			
GOEM Total	(1) One per week	53	3.57	0.627			
	(2) 2 times per week	54	3.65	0.645			
	(3) 3 times per week	120	3.9	0.77	5.27	< 0.001	4,3 - 1,2
	(4) 4 times per week	122	3.99	0.73			
	(5) 5 times per week or more	44	3.92	0.68			
PPLI - Confidence	(1) One per week	53	3.7	0.848			
	(2) 2 times per week	54	3.77	0.88			
	(3) 3 times per week	120	3.99	0.849	7.22	< 0.001	5,4 - 1,2
	(4) 4 times per week	122	4.31	0.799			
	(5) 5 times per week or more	44	4.18	0.766			
PPLI - Knowledge	(1) One per week	53	3.42	0.809			
	(2) 2 times per week	54	3.94	0.692			
	(3) 3 times per week	120	3.96	0.944	10.59	< 0.001	5 - 1,2,3,4
	(4) 4 times per week	122	4.23	0.818			
	(5) 5 times per week or more	44	4.27	0.78			
PPLI - Communication	(1) One per week	53	3.94	0.676			
	(2) 2 times per week	54	4.11	0.741			
	(3) 3 times per week	120	4.03	0.891	4.36	0.002	4 - 1
	(4) 4 times per week	122	4.36	0.719			
	(5) 5 times per week or more	44	4.18	0.87			
PPLI Total	(1) One per week	53	3.69	0.657			
	(2) 2 times per week	54	3.94	0.65			
	(3) 3 times per week	120	3.99	0.754	9.48	< 0.001	5, 4 – 1,2,3
	(4) 4 times per week	122	4.3	0.665			
	(5) 5 times per week or more	44	4.21	0.619			

The ANOVA results for age differences (Table 4) across goal orientation and perceived physical literacy dimensions indicate significant differences in PPLI Confidence, Knowledge, and Total Scores across age groups. Specifically, individuals aged 18-24 years reported higher confidence and knowledge scores than those aged 35 and above. The F-tests for PPLI Confidence ($F = 5.35$, $p = 0.006$) and Knowledge ($F = 6.76$, $p = 0.002$) suggest that younger individuals perceive higher levels of physical literacy. These findings highlight the importance of considering age when assessing physical literacy and goal orientation. Furthermore, the results for exercise frequency (Table 5) across goal orientation and perceived physical literacy dimensions revealed significant differences. More frequent exercisers (4-5 times per week) scored higher on the GOEM Task and PPLI Total than those who exercise 1-2 times per week. For example, PPLI Confidence shows significant variance ($F = 7.22$, $p < 0.001$), suggesting that those who exercise more frequently perceive higher confidence in their physical literacy. These results underscore the impact of exercise frequency on both goal orientation and perceived physical literacy.

Regression Results

Table 6. Model Coefficients of - Perceived Physical Literacy

Predictor	Estimate	*t*	*p*	Standartized Estimate	Lower	Upper
Intercept	0.551	1.45	0.147			
GOEM - Task	0.777	8.82	< 0.001	0.568	0.472	0.663
GOEM - Ego	0.380	2.77	0.006	0.086	0.006	0.165
Task ✻ Ego	-0.074	-2.43	0.015	-0.080	-0.144	-0.015

Note. Model Fit Measures - $R = 0.671$, $R^2 = 0.450$

Regression analysis showed that a higher exercise goal orientation significantly predicted better perceived physical literacy, suggesting that individuals who set and pursue exercise goals are likely to view their physical abilities more favorably. In this table, the regression analysis reveals that both the GOEM task and ego orientations significantly predicted perceived physical literacy. Task orientation ($\beta = 0.568$, $p < 0.001$) demonstrated stronger predictive power than ego orientation ($\beta = 0.086$, $p = 0.006$). The interaction between task and ego orientations was negative and significant ($\beta = -0.080$, $p = 0.015$), suggesting that the relationship between these orientations and physical literacy is complex and may involve moderating effects. The model explains 45% of the variance in perceived physical literacy ($R^2 = 0.450$), indicating a moderate level of predictive power.

Discussion

This study significantly advances the understanding of how exercise goal orientation predicts perceived physical literacy among fitness center members, thereby filling a critical gap in existing research. By examining this relationship within the context of fitness centers, this research offers new insights into how motivational constructs, like goal orientation, can influence individuals' understanding and interpretation of their physical capabilities and needs. Similar findings have been reported in studies indicating that goal orientation significantly affects self-perception in physical activities, suggesting that individuals with mastery-oriented goals tend to have a more positive self-concept regarding their physical abilities (Gómez-López et al., 2015). The findings underscore the importance of fostering mastery-oriented goals in fitness settings to enhance individuals' perceived physical literacy. This approach contributes to a growing body of literature that advocates for a more holistic approach to fitness, one that prioritizes personal development and well-being over competitive performance. Research in educational settings has also supported the emphasis on mastery goals for better learning outcomes, which aligns with the broader benefits of this approach in fitness environments (Rose et al., 2016). By emphasizing personal growth and competence, fitness programs can be tailored to meet the diverse needs of their participants, ultimately leading to more sustainable and enjoyable fitness experiences.

The findings of this study reveal noteworthy gender differences in the perceived knowledge component of physical literacy, as evidenced by the independent sample t-test results. Specifically, male participants scored higher on the PPLI Knowledge scale than female participants, indicating a gender disparity in self-reported knowledge about physical literacy. This finding is consistent with previous research that highlighted similar gender disparities in self-perceived physical competencies, which are often attributed to differences in socialization and access to physical activity resources (Rose et al., 2016). This discrepancy highlights the need for gender-sensitive approaches in the development and implementation of fitness programs. While the other dimensions of goal orientation and perceived physical literacy did not show significant gender differences, the variance in perceived knowledge suggests that females may benefit from targeted interventions designed to boost their confidence and understanding of physical literacy concepts. Interventions such as educational workshops have been shown to effectively enhance women's engagement and confidence in sports and physical activities (Oktadinata et al., 2023). These interventions could include educational workshops or tailored fitness sessions that address common barriers faced by females in accessing and engaging with physical literacy resources. By addressing these disparities, fitness centers can promote a more inclusive environment that encourages all individuals to fully engage in their health and fitness journeys (Tomczak et al., 2021).

The ANOVA analysis of age differences across goal orientation and perceived physical literacy dimensions revealed significant variations that are pivotal for tailoring age-appropriate interventions for fitness programs. Younger participants, specifically those aged 18-24, reported higher confidence and knowledge scores than older participants aged 35 and above. This finding resonates with research showing that younger adults often exhibit greater physical literacy because of recent exposure to comprehensive physical education curricula (Roetert & Ortega, 2019). This trend suggests that younger individuals may have a more robust understanding and confidence in their physical literacy, potentially due to their more recent exposure to educational systems that emphasize physical education. Conversely, older adults may face declining physical literacy, partly because of reduced access to continuing education and physical activity resources (Huang et al., 2020). These findings are critical for developing targeted strategies that address the unique needs of different age groups. For older adults, fitness programs can incorporate elements that enhance their understanding and confidence in their physical capabilities, such as workshops focused on developing skills for lifelong physical activity. Additionally, understanding these age-related differences can aid in designing programs that maintain engagement and motivation across lifespans, ensuring that individuals continue to benefit from physical activity regardless of age (Choi et al., 2018).

The results of the ANOVA examining exercise frequency indicate a strong correlation between frequent exercise and higher levels of both goal orientation and perceived physical literacy. Participants who exercised four or more times per week scored significantly higher in both the GOEM Task orientation and PPLI Total scores than those who exercised less frequently. These findings are in line with previous studies demonstrating that regular physical activity enhances not only physical health but also cognitive and emotional health, thereby boosting overall physical literacy (Passarello et al., 2022). This finding suggests that regular engagement in physical activity is not only beneficial for physical health but also enhances individuals' understanding and competence regarding physical literacy. The relationship between consistent exercise and increased mastery orientation highlights the role of habitual physical activity in promoting intrinsic motivation and competence. Moreover, the motivational benefits of regular exercise are well documented, reinforcing the development of mastery-oriented goals in physically active individuals (Cecchini-Estrada & Méndez-Giménez 2017). Fitness programs that encourage regular participation can foster an environment that supports mastery-oriented goals, leading to improved physical literacy. By providing structured programs and supportive environments, fitness centers can motivate individuals to maintain regular exercise routines, thereby enhancing their overall engagement and satisfaction with their fitness experiences (Sum et al., 2016).

Conclusion

This study highlights the significant role that exercise goal orientation plays in predicting perceived physical literacy among fitness center members. The findings emphasize the need for fitness programs to adopt a holistic approach that prioritizes personal growth and competence, which aligns with the principles of physical literacy. By addressing the unique needs of different demographic groups, such as sex and age, fitness centers can create inclusive environments that foster lifelong physical activity. The insights gained from this research contribute to a deeper understanding of the factors that influence physical literacy, paving the way for more effective interventions that promote health and well-being in diverse populations. Overall, this study underscores the importance of integrating psychological and physiological perspectives to enhance the design and implementation of fitness programs, ultimately supporting individuals in achieving their health and fitness objectives.

Limitations

Although this study provides valuable insights into the relationship between exercise goal orientation and perceived physical literacy, several limitations must be acknowledged. First, the cross-sectional design limits the ability to establish causality between the variables. Future research could benefit from longitudinal studies that track changes in goal orientation and physical literacy over time, providing a more comprehensive understanding of how these constructs interact. Additionally, the sample was drawn from a specific population of fitness center members in Turkey, which may limit the generalizability of the findings to other cultural or demographic groups. Expanding the research to include more diverse populations could enhance the applicability of the results. Another limitation is the reliance on self-reported measures, which may be subject to social desirability bias or inaccurate self-assessment. Future studies could incorporate objective measures of physical literacy and goal orientation to further validate the findings and provide a more nuanced understanding of these relationships.

Additionally, future research could address these limitations by conducting longitudinal studies to track changes in goal orientation and physical literacy over time, offering a clearer picture of their interactions. Additionally, including more diverse populations beyond fitness center members in Turkey would enhance the generalizability of the findings, ensuring that they can be applied to various cultural and demographic groups.

Future Research

Future research should aim to address the limitations identified in this study by employing longitudinal designs and expanding the sample diversity to include participants from various cultural backgrounds and age groups. Investigating how goal orientation and perceived physical literacy evolve over time could provide deeper insights into the dynamics of these constructs. Additionally, exploring the role of technology and digital platforms in promoting physical literacy and goal orientation could be a fruitful area of inquiry, especially given the increasing reliance on digital tools for fitness and health management. Research could also examine the impact of specific interventions designed to enhance physical literacy and goal orientation, such as personalized coaching and virtual reality-based training programs. By identifying the most effective strategies for fostering these constructs, future studies can inform the development of innovative approaches to support individuals in achieving fitness and health goals.

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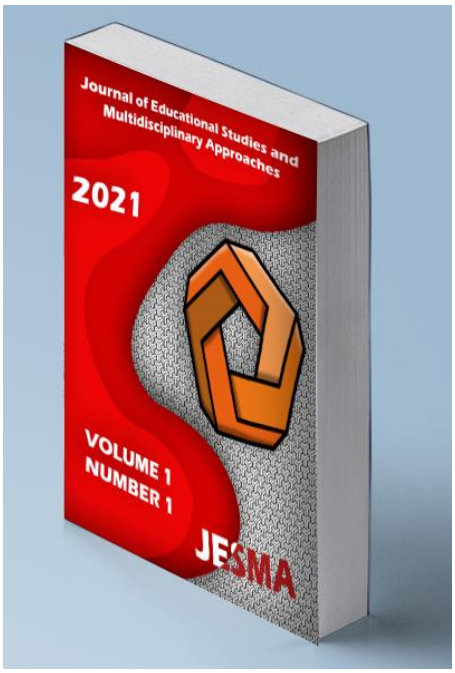

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Political Correctness and Education: The case of the primary education trade unionists of Thessaloniki - Greece

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Political Correctness and Education: The case of the primary education trade unionists of Thessaloniki - Greece

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ABSTRACT

In recent years in Greece, the term political correctness has increasingly appeared in the media, in social networks and in academia. As with other social science concepts, there is no consensus among those who use the term. In the first part of this paper, we explore the historical development of the concept of political correctness, the different meanings given to it by those who use it and set out in detail our own approach. In the second part we present research, the purpose of which was to investigate the views of the members of the boards of the teachers' associations of primary education in Thessaloniki on political correctness in education. The strategy of our research was the Case Study, and the research technique was the semi-structured interview. Our research participants were thirty-five (35) male and female members of the Thessaloniki school boards. According to the results, most of the teachers who took part in our research are aware of the concept of political correctness, use politically correct language and consider that the curriculum of primary education should be improved a lot and change the way it presents the "different" social, ethnic, cultural, religious and linguistic groups.

Keywords: Political correctness, education, social justice, Greece

Introduction

As with other social science terms, there is no one content for "political correctness" on which all those who use it agree. There are even differences of approach on the origins of the term. For most scholars, the term political correctness draws its origin from the willingness shown by some members of left-wing parties to censure or deride beliefs, attitudes, and actions of their comrades (Scatamburlo, 2021). More specifically, the term *political correctness* was first used after the 1917 Soviet Revolution to describe the commitment of some members of the Communist Party of the Soviet Union to its principles, even when they were at odds with their own (Roper, 2020). In roughly the same way the term was used in the late 1940s in the United States of America, where socialists ironically referred to *politically correct* positions of Communist Party members, when the latter uncritically and fervently supported the official positions and attitudes of the Communist Party (Kohl, 1992; Weigel, 2016). The term was even used to describe Nazi orthodoxy (Battistella, 2019), and in the mid-1970s it was associated with the feminist movement (Gauthier, 1997; Andary-Brophy, 2015).

Ideologically, political correctness is based on the principles of equality, ethics, and tolerance (Lichev & Hristoskova, 2017). Therefore, the issues it addresses and covers are largely in common with those of multiculturalism theory and multicultural / intercultural education. Indeed, Spencer (1994, 548) has argued that multiculturalism can be seen as a particular aspect of the wider political correctness movement, while Hughes (2010, 70) has argued that multiculturalism has in many cases been identified with political correctness.

According to the content given to it by those who support it, political correctness indicates one's intention to avoid language, policies and actions that disadvantage members of various subordinate social groups (Dobson, 1997; Gauthier, 1997; Wilson, 1996). Common to the groups advocated by political correctness is that their members have historically suffered racism, persecution and discrimination because of their social class, ethnicity, nationality, gender, sexual orientation or disability, as well as religious, cultural, or linguistic community to which they belong.

The political correctness movement was a request, an expression of desire of the members of the disadvantaged and marginalised social groups to eliminate discrimination and exclusion against them. It was also a demand of the social justice movements. It was precisely towards the fulfilment of this goal, namely equality, that the demand for the use of non-harmful language in work environments and public discourse was aimed (Mills, 2003). The struggle and victories of this movement, especially the favorable legal regulations, gave many women as well as members of other disadvantaged groups the right to claim and obtain better professional positions (Ely, Meyerson, & Davidson, 2006, 2), as well as to raise their social status.

The use of the term political correctness today

The public use of the term faded away towards the end of the 1990s, a period during which it was mainly retained in circles of the people of show business, in particular comedians, who used it to make fun of themselves and mock political parties (Roper, 2020). During this time political correctness became a movement without followers, since almost no one was willing to be called politically correct (Wilson, 1996, 517). Political correctness became a pejorative label and was used derisively, to the extent that Lukianoff (2022) argued that it officially became a joke. Over time, however, the concept of political correctness lost its satirical content and was incorporated into the rhetoric of political parties. This development shows that the issues political correctness covers are highly contentious and thus cause intense political controversy (Beyer, 1994).

Conservative and far-right academics, politicians and media people have linked political correctness with cultural Marxism (Lind, 2009), to which they attribute destructive values, intentions, attitudes, and goals. Indeed, according to a widespread - originating in the United States of America - conspiracy theory, cultural Marxism was created when various Marxists realized that they were losing the political power struggle in Western countries and set their sights on taking over their key cultural institutions

(Busbridge, Moffitt, & Thorburn, 2020) in order to destroy the traditional cultural and social pillars of Western society (Bolton, 2018, 274).

Opponent of political correctness argue that those who support it, they wish to discriminate against the privileged (Pidluzny, 2023), dismantle the foundations of American democracy, rewrite history, reintroduce racism, create new privileged classes, as well as determine what can be said in public discourse (Gonzalez, & Gorka, 2022). Characteristically, Raehn (2004, 14) states: "Political Correctness is Marxism, with all that implies: loss of freedom of expression, thought control, inversion of the traditional social order and, ultimately, a totalitarian state". Political correctness is the enemy among us that undermines the youth of the United States of America (Piliawsky, 1994, 47), an anti-capitalist, pro-third world and minority movement, but it is also anti-American, and generally against Western and political interests (Roberts, 1997, 85).

The term political correctness was even used to enter the imagination of ordinary people the idea that there is a gap between them and the political elite and that members of the latter try to control their language and thoughts (Weigel, 2016). The figure of the confrontation between the people and the liberal elite, which tries to serve the dark interests of its members, is a construction on which the rhetoric of all populist far-right leaders, from Trump to Orban, is based. This liberal elite, according to the narrative served by this schema, has decided to show its sympathy for certain minorities (Andy McCarthy, as cited in Allan, 2012, 3) and attempts to impose multiculturalism (Scott, 2013), as its philanthropist members aim to overthrow Western democracies and make it impossible for governments to maintain their country's order, identities, and values (Bolton, 2018, 283). Thus, the term political correctness has become a word that describes the way the elite censor almost everything, stripping society of spontaneity and honesty (Marques, 2009).

In our view, conservatives and far-rightists use political correctness as a scarecrow, as a new bogeyman in place of communism, in order to discredit the struggle for social justice, to create fear and loathing of those who support and promote it, and to turn the spotlight exclusively on identity politics. More analytically, their opponents use the concept of political correctness to: First, ridicule the liberal project and reject multiculturalism and cultural pluralism (Crawley, 2007). That's way they exaggerate and distort any extreme statement, behavior or action taken by people, who in most cases do not represent any institution or collective, but its' opponents include in the political correctness movement. They also use this term to invert reality, portraying the winners as losers, the perpetrators as victims, those who work for inclusive schools and universities as trying to close them down, and to accuse those involved in anti-racist, anti-sexist and anti-homophobic movements of fighting to divide society. Second, to attack ideas of social equality and justice and to promote their political agenda, a key element of which is the maintenance of economic and social inequalities and hierarchies. Third, to establish as a right to insult, mock and belittle the poor, members of nationally, ethnically, culturally, religiously, and linguistically diverse groups, women, people with disabilities and people of different sexual orientation.

Political correctness and education

In education, the term political correctness refers to a set of ideas about how schools should be structured and run (Glanz, 1996). The main issues related to political correctness in education are the use of non-offensive language and the changes that need to be made in school and university curricula.

The use of non-offensive language is closely related to political correctness, to the point that a portion of those who use the term think that it is exclusively about the use of language (Wilson, 1996). This close relationship starts from the fact that those who support political correctness embrace Whorf's theory of linguistic relativism (McAfee, 2004), according to which language influences thought. Accordingly, language can help all people understand the structures and contents of the world, as well as social phenomena. It can especially help members of historically disadvantaged groups to escape the marginalization and exclusion they suffer. To do so, the language should be used in such a way, which will also help members of other groups to discover their prejudices and try to eradicate them, as well as to change their attitudes and beliefs. Concluding, language shapes our reality and tells us how to think and respond to it (reality). For example, the use of sexist language produces sexism, which it promotes,

just as the use of racist language produces and promotes racism (Roper, 2020, 2). The production and reproduction of prejudice and racism occurs through every day public discourse, as it is shaped and reflected in the media (Van Dijk, 1997).

Politically correct or incorrect views and linguistic references may relate to social groups that enjoy the sympathy of people who hold conservative or liberal views. For example, conservatives want poor whites not to be called as deplorables or white trash, and believers in a religion not to be called religionists, as well as liberals and libertarians want undocumented immigrants not to be called illegal immigrants (Rosenblum, Schroeder, & Gino, 2020).

Political correctness is therefore primarily a conscious attempt to initiate social change through intervention in language (Fairclough, 2003), since it is based on the notion that if language is changed, then thoughts, attitudes and practices will change. In this context, a set of informal norms were developed particularly in the fields of education and psychology (Halmari, 2011) that filtered out contentious language references (Ravitch 2004). Characteristics: From Black to African American, from Gypsy to Roma, from retarded to differently abled, from backward to developing countries, from prostitutes to sex workers, from abortion to termination of pregnancy, from mother tongue to first language. We note that, as in all movements, there were extreme voices and proposals, some of whose were indeed amusing, such as the one whereby black people should be renamed as people with rich melanin!

Those who oppose political correctness raise two objections to the changes it brings to the use of the language. According to the first, these changes (in language) cannot reduce offensive attitudes or change people's perceptions (O'Neill, 2011; Roper, 2020, 1). For example, the life of a blind woman will not improve when she is called visually impaired, and neither will the life of illegal immigrant women when they are called undocumented persons. According to the second, language boundaries lead to restrictions on freedom and behavior, self-censorship (Roper, 2020, 2) and loss of spontaneity.

Changes in school and university curricula were discussed and took place when social movements, organizations and parties recognized the injustices and marginalization suffered by various social groups. Until then, most narratives of social reality in education came from white males of European descent and excluded facts and issues concern marginalized groups (Beyer, 1994). In other words, official knowledge did not include the historical experiences and cultural representations of the work of women, people of color, and others who were less powerful (Apple, 1992). Therefore, various academics, educators and activists argued that curricula needed to change and incorporate knowledge and perspectives of previously 'invisible' groups, namely the poor, women, members of different ethnic and racial groups, disabled people, and people of different sexual orientation. They also argued that education as an institution should establish measures of positive discrimination in favour of members of groups that have historically been disadvantaged.

In this context, policies and regulations were introduced prohibiting hate speech and actions that belittle or stigmatize those from non-dominant groups (Beyer, 1994). Affirmative action measures were also introduced concerning the admission of students from historically disadvantaged groups to schools and universities, as well as the recruitment of staff members. In addition, new academic disciplines such as Women's Studies, African American and Africana Studies, Ethnic Studies and Gay and Lesbian Studies were created as part of this concept.

Conservative academics, journalists and politicians have opposed and continue to oppose the creation of positive discrimination measures and in the (aforementioned) scientific fields, as well as the spread of educational programs and courses with the same aims and directions. They (conservatives) saw and see in them a threat against Western history, literature, and culture in general (Banks, 1993), a threat against democracy in the United States of America and a decline in academic standards and requirements (D'Souza, 1991).

According to its' opponents, political correctness by slowly eliminating meritocracy and intellectual authority, as the main standards in the country's culture, seeks to flatten (American) culture and diminish the role of elite culture (Epstein, 2019). In addition, opponents of political correctness treat with

suspicion any criticism of the classical texts of Western culture (Bennet, 1984), that is, "the traditional literary canon and the pedagogical values it embodies" (Kimball, 1990, xii). Therefore, they reject disciplines, as well as curricula that include writings and texts by women, African Americans, Native Americans, and members of other minority groups. Opponents of political correctness also believe that education should give students access to high quality works (Mack, 1994, 8), such as those of the "tradition of high civilization embodied in the classics of Western art and thought" (Kimball, 1990, xi), which relate to timeless truths and values that should be transmitted unchanged from generation to generation (Bennett, 1984).

Another reason why conservatives oppose changes in curricula is that they, by promoting achievements of other -non-Western- civilization, pose a threat to the common culture, lead to ethnic fragmentation (Ravitch, 1990) and the balkanization of university life and society (Calleros, 1992).

Concluding, at the political and ideological level conservatives and the far right accuses those who support political correctness that they aim to suppress dissent and freedom of opinion and speech. According to their view, while political correctness ostensibly a tool of civility and respect, actually it silences the foundation of a free society and more specifically the free exchange of ideas and dialogue (Cornforth, 2012, 1). Furthermore, in societies that are regulated by political correctness, many people are afraid to express themselves for fear of being judged for doing so (Ely, Meyerson, & Davidson, 2006, 2).

In our view, those who launch the above accusations against political correctness are the ones who react to dissent with bans. It is they who fight to suppress academic departments, specifically those that systematically study racism, post-colonial history, African American studies, feminism, and have made their flagship the war on one scientific discipline, namely Critical Race Theory (Morgan, 2022). They are the ones who -when and where they can- ban courses and books (Shearer, 2022; Savage, 2023), exclude diverse perspectives, understandings, and values, and leave students without inclusive solutions (Wagner, 1994, 409). They are the ones who -when and where they take power- implement policies that deteriorate public education, distort history in favor of white males, colonialists, and oppressors of all kinds, and marginalize students from diverse backgrounds, students with disabilities and different sexual orientations. We stress that disagreement, different approaches, and dialogue are important elements in understanding social reality and developing critical thinking. When these are absent from the classroom, students look like individuals trying to understand a conversation by listening only to one speaker (Graff, 2000, 27).

The research

The purpose of our research

The aim of our research was to investigate the perceptions, attitudes, experiences, and opinions of the members of the boards of primary school teachers in Thessaloniki regarding political correctness in education.

Research questions

Our main research question was: What are the perceptions, attitudes and practices of primary school teachers' unionists in Thessaloniki on issues related to political correctness.

Our secondary research questions were:

1) What is the perception of the teachers in our study about the Elementary School Curriculum in terms of its content related to the life, work and action of the different social/cultural groups that exist in Greece?

2) What are the opinions of the teachers in our research the special weight and the content of the liberal arts subjects (literature, religion)?

3) How do the teachers in our research present current social issues, political issues and decisions in their classroom?

4) Do the teachers who participated in our research use non-sexist language?

Research design

Since our research had this orientation, namely, to explore and interpret, we chose a qualitative research design and more specifically the Case Study, one of the -according to Creswell (2011)- five strategies of qualitative research. The Case Study gives us ample data to describe and interpret social reality, but not to extract laws and regularities. Our case study was the "group" of members of the boards of primary school teachers in the prefecture of Thessaloniki.

As it concerns our research technique, this was a semi-structured interview. This research technique relies on a predetermined and finite number of questions asked to all participants. However, it allows for an out-of-context discussion in which additional themes and perceptions can emerge.

Participants in our research

Our research took place between January and April 2022. Thirty-five (35) from a total of 42 teachers elected to the boards of their associations, twelve women and twenty-three men took part in it. In terms of the service characteristics of the participants in our study, these are as follows:

Table 1. Years of Service

Years of service	Participants
20 - 30 years of service	11
30 - 40 years of service	25

Table 2. Occupation / Position

Occupation / Position	Participants
School principals of general primary schools	11
school principals of special primary school	1
Early years teachers	3
General education teachers	18
Other	2

Thirty-three interviews took place in person and the other two were conducted online. Thirty-one interviews took place in teachers' workplaces and two in non-school settings. Participants were informed of the purpose of the research and received a written statement in which the researcher undertook that ethics would be observed, i.e. that their personal data would not be disclosed, nor any information would be published that would lead to the identification of views with a particular person. The length of the interviews ranged from forty-five to seventy-five minutes and all but two were recorded with the teachers' consent.

Limitations of our research

Our research is qualitative and as such does not claim generalizability. In other words, the findings of our research cannot be generalized to all trade unionists in Greece or elsewhere.

The analysis of the data

The recorded interviews were transcribed, and data analysed using Thematic Analysis (Braun & Clarke, 2006). Thematic Analysis helps the researcher to process large amounts of data, as it is an active process of understanding and coding the ideas, themes and meanings that are repeated. More specifically, after

reading and re-rereading the data, we highlighted and coded the words, ideas and concepts used by the teachers. We then grouped the codes and came up with six themes, which we present below by quoting relevant verbatim excerpts from the interviews.

1. The concept of political correctness
2. The use of "politically correct" language by teachers
3. Sexist language in textbooks
4. Curricula and "different" social groups
5. Curricula and religion
6. Teaching of controversial social issues

The concept of political correctness

Our assessment is that the concept of political correctness is not very well known in Greece. This can be seen from the fact that more than one third of those who took part in our survey stated that they were not familiar with the concept. As for the opinion of those who were aware of political correctness, it ranged from skeptical to negative:

" I find the concept a bit hypocritical in the sense that we are in a state that condemns and puts people aside no matter what it says, since the use of political correctness intend to mitigate any problems with a very nice overlay using language" (K.M.).

"If political correctness leads to anchoring slavery, then we who want to change things become slaves of anchoring If political correctness is used as a tool for us who want to change things and fight injustice, then it is acceptable" (M.B.).

Some of our participants showed that they know a little more about how the concept of political correctness has been used historically:

"I think it started out with very good intentions, but it has become oppressive and overstepping the boundaries, kind of silencing people who can't express themselves freely" (M.M.).

"Yes, it depends on how it's used each time, it's incomprehensible to people, it's hypocrisy sometimes because the practice is different" (S.D.).

Finally, there was one (only) participant whose assessment of political correctness was only positive:
"Yes, I think it's very much right that all people of any race should now use political correctness in their daily lives so that they don't offend or marginalize people."

The use of "politically correct" language by teachers

The teachers who took part in our research use non-offensive language, because most of them have realized that this is required by modern social and political conditions, their pedagogical role and the respect that all people should enjoy:

"I'm very careful about the words, the language I use, because our society is multicultural, there is poverty, violence, etc. I will try to help students understand these issues, convince them to avoid language and actions that do harm to people and live by rules, morality love, respect and above all democracy" (L.K.).

"Always, a student who comes to school with fear is a failure of the teacher, the child should feel comfortable and happy in the school environment, this is truer, this is more so for those from different cultural backgrounds, who should not be offended" (L.M.).

"Yes, yes I careful about the way I speak, that's basic for me, everyone has the right to belong where they belong, to feel as they feel, to express themselves as they express themselves, but through dialogue you can solve their problems and keep balance" (S.D.).

There were some participants who also invoked the fear of the reactions from parents or politicians that some offensive expressions might cause:

"We were forced to adapt to this new trend, because political correctness has now led to fundamentalism, and you can find yourself in trouble where you least expect it. if, say, if he was referring to fat students, then may the mother of the obese child come along and turn us upside down. Say nigger and the father of the black kid comes along? Unfortunately, things have gone badly wrong, so I have to be careful" (K.M.).

"Over the years things have changed, a great effort is made, and many things depend on us teachers. I personally have reached a level where I do not offend social groups, no matter what I say. Things weren't like that when I started out as a teacher, now I do not have to pay attention " (M.P.).

Sexist language in textbooks

Teachers who participated in our research highlighted as an important issue for political correctness the use of non-sexist language, i.e. language that is not limited to the use of the masculine gender to describe any human activity, and they considered that the textbooks, as well as themselves, do not meet its standards:

"....at least in writing we refer only to boys - students and not to girls - students, as if the latter do not exist. The same in the textbooks, referring only to the masculine gender" (S.P.).

"This is wrong for me, both genders should be used, both masculine and feminine, indeed only the male - student is used, the male - teacher etc." (M.M.).

"Generally, we only use the masculine gender and not the feminine or neutral, I don't agree with them there should be an equal treatment of all people" (K.M.).

Regarding the efforts made in recent years by institutions such as universities and the state to promote non-sexist language, a significant part of our teachers has taken a negative stance:

"I think there is an exaggeration in this, when we use it to say that there is a prejudice against women. Using language in this way does not has a negative meaning, it is a grammatical phenomenon" (T.G.).

"Because when I was young, we spend 3 years to learn anti-sexist language at the university, I do not consider it essential. If the curriculum is aimed at gender equality, then using both genders during the lesson, I think does not offer anything substantial" (N.D.).

"It doesn't bother me, but I find it a bit tedious to always use both genders" (H.S.).

Curricula and "different" social groups

The participants in our survey recognize that school curriculum has a strong political dimension, and they consider that the knowledge and skills it provides and promotes favour the dominant ideology and the preservation of the current economic system. Consequently, the “different” groups are not represented in the curriculum, or their picture is incomplete and distorted:

"The Curriculum is never politically neutral, the interests of government policy depending on which policy prevails change the Curriculum and the texts used in the school textbooks" (S.D.).

"It is mainly Greek-centered, as can be seen from its general objectives, the way it promotes the national spirit. However, there are some scattered references to other cultures, as well as recommendations to respect diversity. Ethnocentric with a touch of multiculturalism" (A.V.).

"It is outdated, it must be changed, it does not respond to the needs of society and our students. It creates problems especially for our students with differ ethnic background and with special needs, because there is no alternating curriculum for them. This curriculum must be change, it is fascist because we must apply it the same throughout the country" (B.G.).

In more detail, as far as the different social groups are concerned: First, as far as people living in poverty are concerned, the teachers of our research estimate that they are hardly or not at all presented in the curriculum of the Greek primary school, and that the data for them are misleading:

" Not even close to being in the curriculum, even in the math's books there are only people from the middle class and above, people who can shop for goods, go to a theater etc." (L.L.).

" People living in poverty are presented in the traditional way, as people who have little goods and make do with little and live a measured and happy life" (S.S.).

"As good people who work from morning till night to have a piece of bread, like the breadwinner who struggles for his life" (P.P.).

Regarding people from different ethnic, national, ethnic, cultural, religious, and linguistic groups, the teachers who took part in our research have the same -as for the poor- assessment, i.e. that they too appear very little in textbooks and even with falsified data:

"They are largely absent. When a stimulus is given by the textbooks for these people, teachers grasp at it and try to extend it" (H.T.).

" They are barely represented in the curriculum, which is not designed to promote diversity at any level, not only in ethnicity" (S.D.).

The teachers in our study have a similar assessment of the way women are presented in the curriculum of the Greek primary school, who appear to play:

"a traditional role in the home, housewife at home, dad works, classic Greek family" (M.M.).

"...like a stay-at-home mom, cleaning. But it seems like she's the one taking care of the kids, not the dad. She doesn't appear inferior but within the family she is the one who has to take care of the children a lot" (H.S.).

We underline, however, that some teachers, evaluating positively the efforts made in education on women's issues, had a more optimistic view:

" Some attempts were made, we got away from the curriculum where mom wears an apron and cares about food and most of the time the man decides " (CA).

"Twenty years ago, there were a lot of sexist elements within the curriculum, where the man was higher than the woman. In the last 20 years women are finding their role they are gaining what they should, and I think things will get even better in the future" (G.C.).

The teachers who took part in our research found that people with disabilities appear little or almost completely absent from the curriculum and textbooks of primary education:

"More or less, there are some modules in the large classes, but people with disabilities are not presented as equal individuals who can also contribute to society. However, they are not to be pitied. They have abilities and can contribute to society. This is not shown in these classes" (K.K.).

" Little, the first time they are presented is a reference to diversity. Disability is hardly mentioned at all" (D.D.).

Finally, according to the teachers who took part in our research, people with different sexual orientation are completely absent from the curriculum and textbooks of Greek primary schools:

"No, they don't exist, it's a taboo subject, even parents say to us to not talk about sex education. There is a lot of negativities from parents, books and teachers, Greek society is not ready for it" (L.G.).

"They don't show up at all, we are we are a backward society. Sex education was not established but only spasmodically. Very small steps have been taken and these students are suffering" (B.L.).

Curricula and religion

A key issue related to people of different religions is that of the nature and content of the religious education curriculum. Most of the teachers who took part in our research believe that this subject should cease to have a dogmatic content:

"There is an insistence on the catechetical character. A course that is not addressed to all students cannot have a place in school, it must be removed from the curriculum. On the other hand, religious is a phenomenon you cannot ignore. Thus, a literacy course in the religious phenomenon is necessary in school" (K.Z.).

"Religion books fill children with guilt. They create children without judgment since they have dogmas in their heads all the time. Of course, this has to stop with the religion books and of course teachers should turn them into something else or not open these books at all and only introduce some concepts, but with a sociological approach" (M.M.).

The teachers in our study proposed the replacement of the religion course with a new one, i.e. a course that would help all children to learn about different religions and that would not exclude children of other religions:

"Yes, since we have religious tolerance in our country, at least the constitution of Greece claims this, I believe that elements of other religions should be included in the curriculum" (G.N.).

" it would be better to have a course of Religious studies. Such an attempt had been recently made, but unfortunately it was stopped, because there is pressure from the institution of the Greek orthodox church, which is shaking many things. Certainly, religious studies should be referred to our religion, but the student should be able to learn what each religion stands for and freely decide which religion to follow" (G.M.).

Teaching of controversial social issues

Teaching controversial issues in schools is essential to enable teachers to help students to form their values and ethics, to learn to debate with arguments and to develop their critical thinking. However, due to the nature of these issues, teachers often face problems:

"Many times, when I took a stand on an issue, there were some reactions from parents who disagreed. I always let both opinions be heard, I just said my own. But after a certain point, because of the reaction of the parents, I stopped stating my opinion. Now I listen to the children and say in the end I agree or disagree" (H.S.).

"Yes, yes, because there are many opportunities and the children have a lot of knowledge, I give my opinion. I listen to the children, but I always give my opinion within the framework of political correctness because the last thing I want is for a parent to come the next day and tell me why you told the children this or that." (K.A.).

The teachers in our research said that they use every opportunity presented to them to develop such topics:

"Often, and when the right opportunity is given, i.e. when a child has to be given a reason from the lesson or to say something, I take the opportunity and go to the current issues. I always let the children's opinions be heard. I am very interested to create reflection and dialogue, but I do not take a position" (N.F.).

"Yes, the children themselves often provoke the discussion because, for example, they see something on TV. I try to take part in the discussion, but without influencing them and, first, on many issues I want them to respect the opinion of their family. I can't always give my opinion, because there are issues that we have to be careful about" (K.L.).

Finally, the teachers who took part in our research stated that they develop the topics with great care so as not to be accused of proselytizing or indoctrination:

"Yes, yes, of course you can't guide children ideologically. However, I will listen to them and make them think about other parameters. Especially the social issues I discuss with them. It is methodologically wrong to direct; I ask questions I listen to their own opinion and prompt them to think about something they don't have in their perspective" (F.F.).

Instead of epilogue

Over the last twenty years, while poverty and economic inequalities are increasing, those who control the media, together with influential people in social networks, as well as various politicians and parties, have organized a long and apparently successful campaign to discredit diversity and fight social justice. Furthermore, by scapegoating different people, the above-mentioned actors in public life have managed to distract a large part of the population in many countries from their real problems and turn their attention to issues of identities. By making their ideology dominant, they have promoted policies that violate and nullify the rights of people belonging to different national, ethnic, cultural, and religious groups, as well as women, people with disabilities and people with different sexual orientations. This is the context in which we understand the attack on political correctness, which is not a defined movement with specific demands, but is supported by people who advocate social justice. Conservative and far-right politicians, as well as some media, over-use the term as a message in favor of maintaining discriminations, economic and social inequalities, as well as in favor of unequal distribution of power. Some of them have even made political correctness a leading social problem, as for example Donald Trump, who during his 2015 political campaign stated that "the big problem this country has is political correctness" (Milbank, 2015).

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In Greece, the concept of political correctness has begun to be used in public discourse, but not -as our research has shown- to any great extent. Therefore, there is a gap in social research, which we believe our research helps to fill.

Our research aimed to explore teachers' perceptions, attitudes, experiences, and opinions regarding political correctness in education. We believe that our findings are important for a better educational policy related to an inclusive and democratic school, because they give the actors who formulate educational policy (politicians, senior education officials), evidence that they can use to promote the issues covered by political correctness. In addition, our research gives a 'voice' to teachers, whose opinion and suggestions should be considered in relation to educational issues.

In conclusion, we stress that believing in the emancipatory potential of education, we advocate the notion that that schools can play an important role in achieving a better society. In other words, we are convinced that education, together with other institutions can play an important role in combating racism, discrimination, exclusion, and economic inequalities. For this, however, it requires broad recognition of its (education's) role and sustained effort by all the institutions and individuals involved.

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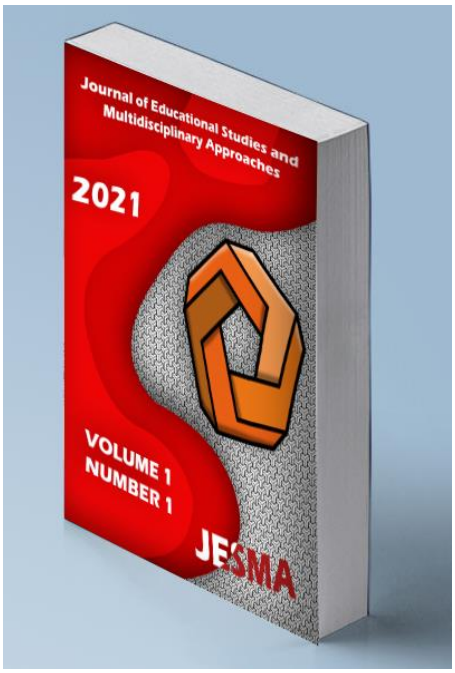

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The Impact of Quillbot as an Automated Writing Evaluation Tool on EFL learners[1]

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The Impact of Quillbot as an Automated Writing Evaluation Tool on EFL learners

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ABSTRACT

Automated Writing Evaluation (AWE) constitutes a machine-based approach employed in the evaluation of learners' writing proficiency. Recently, its widespread implementation has been geared towards enhancing learners' editing competencies. The primary objective of this research was to thoroughly assess QuillBot as an Artificial Intelligence (AI) tool system, specifically examining its utility for students in the context of paraphrasing and checking grammatical, mechanical and organizational mistakes. QuillBot stands as an online application designed to facilitate the paraphrasing of written content, mitigate the risk of plagiarism, condense lengthy sentences, and enhance grammatical precision to impart a professional appearance. This tool serves as a viable alternative for students confronted with the challenge of rephrasing content when manual efforts prove challenging or when innovative ideas for paraphrasing are not readily available. Employing a pre-post quasi-experimental research design with convenience sampling, the study focused on automated writing of a descriptive paragraph. A total of Turkish 48 English as a Foreign Language (EFL) learners were distributed across two groups, encompassing control group and experimental group. The quasi-experimental design incorporated triangulation with qualitative data derived from retrospective notes and reflective journal notes, while quantitative data underwent analysis via non-parametric tests and SPSS. Findings indicated a positive impact of the Quillbot on experimental group. The qualitative data analysis underscored participants' favourable assessments of both the software and the automated writing experiences.

Keywords: Online Application**,** Automated Writing Evaluation, Artificial Intelligence Machine-based approach, English as a Foreign Language (EFL)

Introduction

Over the past five decades, technology has undergone rapid development and has permeated nearly every facet of life, encompassing both industry and education. Its profound influence has played a pivotal role in the advancement of humanity and the evolution of international relations, fostering global connections among individuals from diverse geographical locations. The use of technology is transforming the way we think, learn, and carry out tasks in a ground-breaking manner, as revealed by (Collins & Halverson, 2010). Interactive educational technologies, including games, robots, virtual reality (VR), computer simulations, block-based computing, and internet-related tools, can enhance traditional ICT tools like projectors, digital whiteboards, and digital textbooks (Weng & Chiu, 2023).

The preceding century has experienced an unprecedented linear progression and innovation, primarily attributable to the substantial integration of technology into people's lives. This transformative integration has significantly altered human existence, with technological tools becoming ubiquitous in daily activities. Whereas conventional home telephones were once the norm, contemporary society predominantly employs mobile phones for a myriad of purposes. The advent of sophisticated technologies has led to the near-ubiquitous replacement of traditional home telephones by mobile phones. The swift and substantial changes witnessed by humanity within a relatively short span of time have also left an indelible impact on human behaviours and attitudes. Artificial Intelligence (AI) holds great potential in the realm of education by offering students individualized guidance, support, or feedback, and aiding educators.

The use of certain AI techniques could help achieve some or all of the following objectives, such as enhancing information retrieval, distinguishing intricate patterns, engaging in natural language conversation, and adapting based on "experience" (Peelle, 1971).

Several AI technologies contribute to language-related activities to enhance language quality and clarity, the sentence can be rephrased as follows: The system provides automated feedback for corrections and prompt responses, offers intelligent tutoring by answering questions and providing explanations, and personalizes learning experiences by delivering content tailored to individual needs. The extensive technical progress of AI encompasses several subcategories, including collective intelligence, computerised vision, common sense, data mining, and emotional intelligence. The subjects covered include game theory, image processing, natural language processing, neural networks, pattern recognition, and robotics.(Chong, 2020). AI systems utilize machine learning to execute specific tasks, such as providing feedback on learners' written work, translating written text, administering automated tests, or facilitating structured conversation practice through a chatbot application. The process of machine learning process involves utilizing statistical methods to analyze extensive sets of training data, recognize a particular way, construct a model (typically in the form of algorithms), and subsequently take actions based on that model (Hockly, 2023). Instructional Computer-Assisted Language Learning (ICALL) environments have been specifically crafted to enhance the learning journeys of students with varying language backgrounds and diverse learning objectives.

QuillBot is a widely used, easy-to-use and free paraphrasing AI tool as a machine learning system. As per Fitria (2021), the AI methodology integrates deep learning with specific natural language analysis approaches. Its automated function involves the extraction, addition, or alteration of words, thereby generating a novel sentence paraphrase, giving feedback and also providing an AI-based product that suggests paraphrases. When engaging the paraphrase function in QuillBot, the application undertakes the task of rewriting provided texts.

The importance of feedback in education has been well recognised due to its significant influence on students' learning and instructors' instructional habits and practices (Niu et al., 2021; Winstone & Carless, 2019). The significant influence of teachers' feedback in the classroom has frequently exerted considerable force on them, particularly in substantial classes and when it comes to assessment. The assessment practices of teachers are often considered to be primarily focused on "testing" rather than "assessment" when there is a lack of feedback (Wang et al., 2023).

Subject and Problem of the Research

This research has investigated the face-to-face evaluation problems both the challenges encountered by instructors and students during the process of learning and teaching languages. While numerous studies have examined these challenges, fewer have explored the role of automated writing evaluation tools in enhancing learning, writing, and instructional procedures. At nearly all educational institutions, computers are utilised for some tests and exams, such as proficiency exams, and TOEFL and also are used for preparing curriculum and timetable. Therefore, this study will explore the use of automated writing evaluation tools for improvements of students' writings while giving feedback. Karakaya illustrates that various visual elements such as images, animation, color, and visual design play a collaborative role with language in online communication. Platforms such as e-mail, instant messaging, chat rooms, Usenet groups, MOOs, blogs, and wikis facilitate novel modes of discourse, authorship, identity construction, and the establishment of learning communities and affinity groups that transcend international borders (Karakaya, 2010).

Research Questions

To fulfil the aim of this investigation, the subsequent research inquiries were developed:

1) How do Quillbot as an Artificial Intelligence Evaluation tool influence the quality and efficacy of students' writing skills and their confidence in writing capabilities of them?

2) Is there any advantage and effect of Quillbot as an Artificial Intelligence Evaluation tool on the enhancement of control and experimental group students' writing skills and educational outcomes by doing a comparison between the outcomes of the pre-test and post-test?

3) Is there a challenge in implementing Quillbot for the experimental group students?

4)Is there any effect of the application Padlet for on experimental group students' writings?

Purpose of the Study

This study aimed to evaluate the efficacy of QuillBot as an artificial intelligence tool for instructors and students in the domains of paraphrasing and grammar checking in English writing, specifically focusing on its free version. The study sought to examine the attitudes of EFL students and teachers towards automated evaluation tools and their use of technology in learning and teaching English. The study was carried out at a Turkish governmental institution, where the participants' writing levels and computer usage were assessed through a pre-test. The study also investigated the students' and teachers' attitudes towards QuillBot, an online evaluation tool. Qualitative, semi-structured face-to-face interviews (Bin Zou & Zhang, 2023) were used to examine the application of computer technology in teaching languages and to probe into the students' autonomy in using computer technology and the barriers to its implementation.

Significance of the Study

The importance of this study is underscored by its examination of English teachers' and students' perceptions of using automated writing evaluation tool and the illumination it provides on their utilization of technology in language teaching methodologies. Notably, there is a dearth of adequate data concerning the use of Quillbot, an online evaluation tool, and the attitudes of teachers and students toward this tool in Turkey. Consequently, this research stands as distinctive in furnishing comprehensive data concerning the impact of Quillbot on teachers and students in Turkey and their integration of computers in language learning and teaching methodologies.

REVIEW OF LITERATURE

The advancement of technology has significantly transformed the planet over time. The proliferation of technology worldwide has a profound impact on nearly every facet of life. The remarkable advancement of technology has significantly impacted education, making it one of the utmost crucial facets of life. The advent of technology has greatly enhanced the accessibility and effectiveness of education worldwide. Hence, technology has the potential to enhance student output, fluency, and potentially the writer's capacity to generate meaningful texts at an earlier stage in their language-learning curriculum. With a diverse range of tools and methods at hand, the integration of technology can offer the essential scaffolding and personalized support for students, mitigating certain challenges associated with acquiring proficiency in writing in a second language. The effectiveness of these technological elements in instruction should be assessed to optimize learners' time and efforts in the pursuit of second language acquisition (Raquel, 2004).

This need for assessment becomes even more relevant when considering the origins of artificial intelligence, which can be traced back 70 years to Alan Turing's 1950 publication, "Computing Machinery and Intelligence." In his seminal work, Turing posed the fundamental question of whether computers can exhibit thinking capabilities, and whether they can deceive humans into perceiving that they are engaging in conversation with a fellow human interlocutor rather than a computer. Understanding and leveraging these capabilities can significantly enhance the instructional process, making it more efficient and effective. The question is currently employed to evaluate the level of similarity between AI programmes and human people, referred to as the imitation game or Turing test. (Kwon et al., 2023). Artificial intelligence (AI) provides computer-assisted education with a previously deficient or completely absent attribute: the ability to engage in perceptive and "intelligent" interaction with a machine.

More precisely, the use of certain artificial intelligence approaches has the potential to advance one or more of the following objectives:

1) enhance the process of accessing information

2) accurately distinguish intricate patterns

3) employ a method to engage in discussion using natural language.

4) evolve and transform due to acquired 'knowledge'.

Within the educational context, these objectives can be transformed into benefits for the learner. For instance, artificial intelligence would significantly simplify the process, resulting in a broader range of feedback. This would enable a more interactive and intellectually stimulating partnership with the machine in an educational context, rather than viewing it as a mere taskmaster. Unfortunately, it is challenging for a tutor to fully meet the students' expectations due to their diverse abilities and categories in a classroom setting. Special education learners and advanced education learners have unique requirements. That is why, automated evaluation tools become indispensable. By using these tools, all students, regardless of their aptitude for learning, are given equal opportunities to acquire language skills at this stage. Intelligent systems demonstrate remarkable adaptability to the student's learning aptitudes and deficiencies.

Automated Writing Evaluation (AWE)

Al-Inbari and Al-Wasy mentions that Automated Writing Evaluation is a machine-based method employed to evaluate the writing of learners(Al-Inbari & Al-Wasy, 2023). Lately, there has been extensive use of this strategy to enhance learners' editing skills. As per Da Yan, the integration of technology into the process of acquiring linguistic skills has resulted in favourable outcomes on the proficiency and involvement of second language learners. Recent advancements, particularly the implementation of AI-based solutions, signify substantial strides made by educators in this domain. Advancements in technology accessibility and cost-effectiveness have heightened the adoption of technology-enhanced learning approaches in (L2) writing (Yan, 2023).

According to Zhang, the increasing interest in recent years has been focused on the utilization of automated writing evaluation (AWE) systems in (L2) writing. The majority of prior research focus on evaluating the impact of Automated Writing Evaluation (AWE) feedback on the writing of second language (L2) students. These studies generally examine aspects such as the scoring mechanism, validity, and reliability. However, they pay little attention to how L2 students actually interact with AWE input during the procedure of revising their writing (Zhang, 2020).

The initial implementation of automated essay scoring (AES) occurred in 1966. Subsequently, advancements in language processing technologies and statistical methods have facilitated the creation of new scoring engines, such as e-rater, Knowledge Analysis Technologies, and IntelliMetric. These engines are capable of analysing various aspects of text, including lexical, syntactic, semantic, and discourse features. Certain automated writing evaluation (AWE) instruments, like Criterion and MY Access, were created to offer formative feedback on diverse rhetorical and language-related aspects, alongside additional materials and automated assessments. While the majority of Automated Essay Scoring (AES) systems have been validated by demonstrating consistency and agreement with human raters, there is still a need to evaluate the educational and evaluative utility of Automated Writing Evaluation (AWE) (Li et al., 2015).

In Automated Essay Scoring, summative essay scores are usually generated by NLP computer programmes, which analyse the linguistic and semantic characteristics of the essays. AES algorithms are constructed using machine learning models that are trained on a collection of essays. These writings are evaluated by human raters using a scoring rubric. The models are then tested to guarantee that they can accurately assess a different set of essays. The algorithm's values are juxtaposed with their scores given by the raters to ensure their alignment and reliability. Undoubtedly, AES systems are often highly dependable, exhibiting significant agreement and associations with human raters. Automated scoring can provide several benefits that are similar to multiple-choice scoring, such as quick and constant scoring availability, reduced costs, and more consistent scoring. This can make it possible for some recommended testing programmes and learning settings to utilise more construct-relevant items, even if they were formerly too difficult to include (Ramineni et al., 2012). An increasing body of research is investigating the integration of automated writing evaluation (AWE) tools in writing classrooms, indicating a growing interest in their possible application for formative assessment. Nevertheless, like any assessment method, these tools require validation to ensure the accuracy of their intended interpretations and applications (Jim Ranalli & Chukharev-Hudilainen, 2017). Moreover, AWE can be used for summative assessment in writing instructions.

The creators define the feedback provided by the AWE tools MY Access, WriteToLearn, and Criterion as addressing both micro-level features of language, such as punctuation, spelling, mechanics, syntax, and use, as well as macro-level aspects.

Various AWE tools offer comprehensive and/or analytical evaluations to indicate the merits and shortcomings of a proposal. However, widely used AWE systems, such as Pigai, Quillbot, Criterion® and My Access!.

The purpose of these tools is to aid in writing for K-12 and college education, but they do not offer feedback on genre-specific writing or formative feedback on causal discourse. Some systems, such as

Grammarly mainly provides input on spelling, mechanics, and grammar. Conversely, Writing Pal provides feedback that is focused solely on writing processes and tactics. Criterion and similar systems provide feedback at both levels. (McCarthy et al., 2022).

Various forms and combinations of feedback are expected to provide different effects in terms of students' perceptions and more objective findings. In their study, Chen and Cheng found that automated feedback may be employed in the early phases of drafting and editing to provide formative assessment. This can then be combined with input from teachers and peers in the subsequent phases (Chen & Cheng, 2008). The significance of automated feedback, particularly the comprehensive score input provided by Automated Writing Evaluation (AWE). Link identified two further applications of the AWE score: as an initial evaluation or assessment before submitting a project or work for consideration to encourage student involvement in correction, and as a constituent of formal assessment in the classroom. Although educators as well as learners identified issues with automated scoring feedback, there was a lack of consistency between the AWE results and their evaluations.(Link et al., 2020).

There have been very few studies that have utilized this framework to assess the educational benefits of Automated Causal Discourse Evaluation Tool (ACDET) for language learners. The ACDET is designed to help ESL students improve their understanding of discourse activities that include discussing cause and effect relationships by evaluating two dimensions: Language Learning Potential and Meaning Focus. To evaluate the effectiveness of the Intelligent Academic Discourse Evaluator (IADE) tool in achieving comprehensive learning outcomes, observable learner behaviour was used as evidence. The evaluation was based on six criteria: Language learning potential, Learner fit, Meaning focus, Impact, Authenticity, and Practicality. The above standards give an in-depth perspective on the educational achievements that arise from the utilisation of IADE. (Feng, 2015).

There are several AWE tools such as; Criterion, Writing Pal, Pigai, Grammarly and Quillbot.

Criterion

Criterion provides a comprehensive evaluation that assesses the writing sample uploaded by users demonstrates a high level of overall quality as well as offering thorough diagnostic comments on mistakes across several areas. Domains may be obtained in a matter of seconds. It offers educators personalised reports that allow them to assess the success of their pupils. In addition, it offers students a full "Writer's Handbook" that encompasses input terms, interpretations of faults accompanied by instances, and recommendations for correcting errors and enhancing the organisation and development. (Dikli, 2006). Teachers have the ability to offer a prompt for writing derived from the Criterion subject library, which consists of over 400 writing prompts all types of writing and difficulty stages. Levels ranging from fourth grade to the higher education level. Teachers have the ability to provide feedback on students' written work by utilising the "Comment" or "Dialogue" sections.(Han & Sari, 2022.)

Writing Pal

W-Pal is an automated programme that evaluates writing and offers intelligent guidance for improving writing skills. It offers many methods for practicing writing, such as game-based strategy exercises and essay composition. The W-Pal training focuses on eight distinct components of writing: freewriting, planning, introduction development, body development, conclusion development, unity, paraphrasing and revision.(McCarthy et al., 2022).

Pigai

In addition to providing corrective feedback, it also includes holistic scoring, ranking, the top and lowest scores, and final remarks. The scoring model is calibrated using a comprehensive collection of texts that includes normal English, English essays written by students, and alternative English textbooks. Pigai computes a comprehensive score for each. The essay is evaluated by quantitatively comparing it

to other writings throughout its collection of texts in four specific domains: vocabulary, sentence structure, organisation, and subject relevancy (Zhang, 2020).

Grammarly

Grammarly's free edition offers input on spelling, punctuation, grammar, and conventions, such as space, capitalization, and spelling peculiar to different dialects. Grammarly promptly delivers comments for enhancement as soon as a document is posted online. The material that has been uploaded is shown to the left. The screen displays faults with red underlining, which is indirect feedback. The right half of the screen displays immediate feedback. Direct feedback provides detailed information about the exact type of issue, such as grammar, along with possible improvements and ideas (Koltovskaia, 2020).

Quillbot

Undoubtedly, we are familiar with the concepts of "paraphrase" or "rewrite" and now we will delve into their mechanics. The paraphrase tool operates by comparing two sources of text: the text that you type and the original text. One of them is called Quillbot.

QuillBot has undergone significant enhancements, introducing a range of features to augment its functionality. The initial addition was a summarization feature, facilitating the condensation of lengthy text into concise summaries. Subsequently, a grammar checker was integrated to assist users in identifying and rectifying grammatical errors in their written content. In more recent developments, QuillBot has expanded its capabilities by incorporating a citation generator, plagiarism checker, co-writer, and translator, thereby evolving into a comprehensive writing tool (Nour El Houda et al., 2023).

QuillBot is an online programme that can reword text, detect and prevent plagiarism, shorten long words, and improve grammar to achieve higher precision and a more sophisticated presentation. This research aims to assess the QuillBot as an Artificial Intelligence (AI) device that allows learners to paraphrase and rewrite texts in English. The QuillBot is accessible for both free and commercial versions. This study employs a descriptive qualitative methodology. The data used is an English abstract paper.

The findings indicate that QuillBot's text rephrasing tool employ multiple strategies for rephrasing the text, including: 1) employing equations or synonyms for paraphrasing, 2) altering the word's form for paraphrasing, 3) utilising active or passive sentence structures for paraphrasing, and 4) rearranging the word order in sentences for paraphrasing (Nguyen, 2023). This paraphrase employs the Standard Mode, which aims to maintain a balance in modifying the text while ensuring that the original meaning remains intact. Fitria states that the AI method combines deep learning with other techniques for natural language processing. Its function is to automatically remove, insert, or modify words in order to generate a completely new phrase (Nur Fitria, 2021).

The complimentary edition of QuillBot permits paraphrasing of content within a limit of 400 characters. The advanced iteration of this tool extends the character limit to a maximum of 10,000. QuillBot encompasses seven noteworthy features, among them is the Standard Mode, which guarantees that alterations made to the input text maintain its intended meaning while augmenting its originality.

Fluency Mode is designed to prioritize the natural flow of writing and uphold precise and suitable English grammar. It introduces subtle adjustments to the text while maintaining its original meaning effectively.

On the other hand, Creativity Mode places a strong emphasis on substantial modifications to the provided text. However, such extensive alterations may result in a shift in meaning or overall coherence. This mode proves beneficial when the objective is to make the text distinctly different from the original content.

Furthermore, the Creative+ Mode allows for more intuitive and extensive modifications, especially concerning common phrases or expressions.

The Shorten Mode is designed to compress the information while preserving its intended significance, making it especially valuable for minimising word count or total text length. On the other hand, the Expand Mode aims to lengthen the text by including additional words, which might be beneficial when trying to boost the overall word count.

Finally, the Formal Mode is dedicated to altering the text to be more appropriate for a formal audience. This approach proves highly effective for writing in academic or corporate contexts.

Using Padlet in Classrooms

Padlet facilitates the instantaneous display of various file formats on the wall, offering an invaluable method for organizing teaching materials. Both the teacher and students populated the respective Padlets with videos, documents, and images utilized during the lessons. This approach enabled students to conveniently access and download resources directly from the platform. A class diary is a document generated promptly after each session, encompassing a session summary along with qualitative data pertaining to the teaching process. Padlet facilitates interactive debates among students by providing various collaboration options. These options include the ability to add comments to others' posts or to engage in reactions using a voting system (Beltrán-Martín, 2019).

The results of this study indicate that the utilisation of Padlet software has the potential to enhance students' learning by enhancing their level of involvement in activities both within and beyond the classroom. The programme offers extensive functionality and enables students to work alone or collaboratively on individual and group assignments (Megat et al., 2020). In this study, Padlet serves as an electronic portfolio, allowing students to archive their written works. It provides a platform for collaborative learning, enabling students to access and review each other's writings. The researcher utilizes Padlet to provide feedback and assign grades to the students. Additionally, before an examination, the researcher downloads the students' writings and distributes them to their respective groups, facilitating collaborative study and revision of both individual and peer contributions.

THEORETICAL FRAMEWORK

Theoretical frameworks lead, formulate, and explain how research studies are conducted. The following hypothesis has shaped the researcher’s approach to defining, explaining, and understanding Turkish students' preparatory classroom writing and technology use.
Early CALL classrooms just had a computer that only the teacher could utilise. This phase of CALL is known as ‘Behaviouristic CALL’ (Tafazoli & Golshan, 2014). Computers were mostly used for repeated workouts and skill reinforcement. Structural CALL is associated with the 1970s and 1980s. This period's technology resembled classroom methods, according to some. Grammar-translation and audio-lingual methods dominated Structural CALL language courses. Tafazoli and Golshan defined the next step of Computer-Assisted Language Learning as 'Communicative CALL' (2014). In the 1980s and 1990s, systems prioritised accuracy and fluency equally instead of correctness. The main activities emphasised communication skills in English education.

Warschauer & Healey (1998) call the newest step of Computer-Assisted Language Learning (CALL) 'Integrative CALL'. Technology in the 21st-century language classroom is the focus of this phase. It emphasises agency and the learner's independence. The focus is on interpersonal communication, with technology used to access real materials showing how the language is used. Integrative CALL requires technological instruments to be incorporated into language study rather than used sometimes in computer labs.Tafazoli & Golshan (2014)
Bax uses 'Restricted CALL,' 'Open CALL,' and 'Integrated CALL.' Limitated CALL emphasises language system content with tasks like rewriting texts and answering closed-ended questions (Bax,

2003). This period involves little student interaction. Open CALL, on the other hand, emphasises computer-mediated communication and linguistic abilities. Simulation games like Second Life help students use tools. Finally, Integrated CALL integrates language skills and employs classroom-appropriate technologies. This method encourages student-technology engagement. (Erol Aslıhan Nur, 2022). Stockwell stresses that CALL environment substantially affects technology selection and use (Stockwell, 2012a). Many CALL researchers have also noted the importance of context (Wang, Lili, 2023). The phenomena is complex, involving the school setting, policies, instructional technique, educational objectives, students' backgrounds, expectations, prerequisites, and other factors.

METHODOLOGY

Research Design

This study utilised a quasi-experimental research approach known as a pre-test and post-test control group design. The researcher designated intact classes as the experimental group and the control group.

The researcher gathered data of quantitative and qualitative kind in order to address the study inquiries. The study's quantitative component analysed the influence of integrated automated-teacher input regarding students' analytic composition grades and error count. This was done by comparing the results of pre-test and post-test writing assignments. The qualitative data collected from student comments provided insights into students' perspectives on obtaining automated feedback on their writing proficiency.

The study gathered qualitative data through individual interviews with teachers and students to analyse their use of Quillbot and assess the perceived advantages and challenges associated with utilising the system's corrective feedback. Simultaneously with the collection of this data, quantitative data was also collected. This included the list of submissions for each paper as recorded by the researcher, as well as AWE error reports. The post-test underwent evaluation by two instructors, thereby enabling the assessment of interrater reliability. The purpose of collecting this data was to analyse the impact of AWE for evaluating and providing comments on students' writing practice to enhance the correctness of their paper drafts.

The Research Procedures

The researcher taught both the experimental and control groups. All of them were given identical guidance on academic and introspective writing during their lesson. In order to accomplish the objectives of this study, the subsequent methods were implemented:

1. A total of 48 students were divided into two separate groups: a control group comprising 24 individuals and an experimental group consisting of 24 individuals. Prior to beginning the experiment, each group was instructed to compose a descriptive paragraph. This activity served as a pre-test to assess writing proficiency both of the groups.

2. The paragraphs in the pre-test were evaluated based on a rubric created by the KET Assessment of Writing Scale by Cambridge English. The rubric for grading paragraphs has five aspects, each assigned a certain percentage. These factors include content and organisation. The user's text mentions the topics of vocabulary, language use, and mechanics, with a numerical reference to 10 and a vocabulary level of 4. The number is 6.

3. A dedicated classroom was established to provide comprehensive instruction to the two members of the experimental group on the software (Quillbot). The instruction covered topics such as software features, usage guidelines, handling programme feedback, and exploring various functions.

4. The participants in the experimental group were instructed to submit their colleagues' paragraphs to the Quillbot programme, while they themselves were prompted to submit their own paragraphs. Subsequently, the experimental group was required to obtain the programme feedback,

implement all essential revisions, and ultimately transcribe the final versions of the altered paragraphs exactly as they are shown in the programme.

5. The experimental group was presented with the retrospective note question during this step.

6. The essays from both the control and experimental groups were evaluated as a post-test of the treatment. The evaluation was done using rubrics by Cambridge KET.

7. The feedback technique for the control group only consisted of written instructor input pertaining to the structure and substance of the work. The teacher offered criticism on the form, namely about grammar, use, and mechanics, by emphasising the paragraphs of the pupils' contained words, phrases, or sentences that required correction or improvement. The comments lacked clarity and was not straightforward. The teacher was permitted to utilise her pre-existing collection of mistake codes during the research to provide an authentic feedback process. The mistake codes and the feedback given by the teacher were analysed via Quillbot.

Participants

The research was conducted at a Turkish state university, located in Konya in 2023-2024 Fall Term. A non-probability self-selection strategy was employed to enlist 48 participants who were English as a Foreign Language (EFL) students currently enrolled in a preparatory class. Students were evaluated based on the institution's English Language Admission Test and determined to have a minimum English proficiency level of Common European Framework of Reference (CEFR) A2. The study adhered to established ethical protocols, with subjects providing voluntary consent to participate. During the discussion with the participants, it was clearly specified that their participation in the study would not be compensated with any extra academic credit.

The study included a cohort of 48 English as a Foreign Language (EFL) students, consisting of 20 males and 28 females, with ages ranging from 20 to 30 years old. The participants were categorised into two distinct groups: a control group who received feedback on their assignments from a human teacher, and an experimental group which received feedback created by the Quillbot programme.

Data Collection Tools

Pre- test and post-test writing tasks

For both pre-test and post-test, the students were required to write a 150–200-word length descriptive paragraph on a singular subject that had been chosen for all students. Both tasks were selected from the paragraph topics of the book" Language Hub Main course" and the writing course assumed that assignments were similar in terms of the students' degree of competence, experiences of writing classes, educational interests, and cultural features, with regards to topic familiarity. The students were allowed 40 minutes to write their paragraphs using Padlet application which had been introduced to students beforehand. The course teacher accepted the paragraphs through Padlet software to ensure that every student could write. The students composed their essays on the subsequent subjects, which were not previously deliberated with them.

Pre-test writing topics

The topics that students wrote "Describe your neighbourhood? Describe your best friend? The happiest (most frightened, worst etc.) moment in your life. Support your position with explanations and examples from your own experiences, observations or reading."

Post-test writing topics

The topics that were written by students at the end of the implementation "Describe your dream apartment? Describe your first day of school? Describe a cinema that you watched recently? Describe your favourite film? Give examples and explanations for your answer.

Student Reflections

The students in the experimental group were instructed to write their comments on the process of completing their tasks under the combined automated-teacher feedback condition. They composed their views after the conclusion of the treatment, once they had acquired sufficient expertise in the feedback process they had been subjected to. The researchers devised a set of questions to direct the students in articulating their encounters with and perspectives on getting automated responses from Quillbot. Students also gave reflection about using Padlet. The pupils were permitted to compose their views in Turkish as it was anticipated that they would articulate their opinions more effectively in their own language. The researcher of the study translated the quotations provided in this article into English. What is more, following the implementation of the tool, the students were interviewed by the researcher. Each of the 24 students in the experimental group was interviewed in semi-structured interviews lasting 30 minutes. The interviews took place in secluded offices and were recorded using a digital voice recorder. The recordings were then transcribed word for word.

Data Analysis

The statistical data analysis in this study was conducted using SPSS Version 22 for Windows. The study also incorporated the data derived from the retrospective notes and semi-structured interviews. In order to ensure the dependability of the coding, the paragraphs from the pre- and post-tests were assessed by the two researchers and an additional colleague, utilising the rubric provided by Cambridge KET as described before. The third research question was addressed by analysing the quantitative data using ANOVA. The purpose of the test was to ascertain whether there were notable disparities between the writing grades of experimental and control groups. The interview data collected from students were subjected to qualitative analysis, during which emergent categories were discovered.

Subsequently, conclusions were derived from these categories in order to address the second study inquiry.

ETHICAL CONSIDERATION

The study adhered to established ethical protocols, with subjects providing voluntary consent to participate. During the discussion with the participants, it was clearly specified that their participation in the study would not be compensated with any extra academic credit.

The data was collected from students who were allowed to express their perspectives in Turkish, since it was expected that they would communicate their viewpoints more efficiently in their own tongue. The researcher of the study rendered the quotations presented in this article into English. In addition, the researcher administered semi-structured interview questions to the pupils. She captured the students' vocalisations and subsequently translated them into English. Students underwent individual semi-structured interviews, with each session spanning a duration of 30 minutes. The interviews were conducted in private offices and recorded using a digital voice recorder. The audio recordings were then transcribed verbatim.

Ethical review board name: Necmettin Erbakan University
Date of ethics review decision: 02/02/2024
Ethics assessment document issue number: 17798

FINDINGS

Upon examining the research questions;

RQ1. How do Quillbot as an Artificial Intelligence Evaluation tool influence the quality and efficacy of students' writing skills and their confidence in writing capabilities of them?

The examination of the data obtained from the student reflections yielded two overarching themes, namely good impressions and negative perceptions. Each category is outlined below. Excerpts of exemplary quotations extracted from the reflection papers.

The favorable perceptions of the experimental group of students towards automated writing evaluation tools were evident in their positive views of the automated feedback they received in a writing course. Initially the students discovered that automatic feedback was beneficial for improving their writing skills. According to them, the most advantageous aspect of automated feedback is its promptness and availability to students, provided they have an internet connection. The individuals held the belief that receiving prompt feedback facilitated the process of rectifying their mistakes, particularly when their thoughts and essay structures were still vivid in their brains. Furthermore, they claimed that promptly rectifying mistakes improved long-lasting retention of knowledge. The following remarks, offered by one of the participants, clarified these points:

"One aspect of automatic response that I particularly appreciated was its immediate accessibility upon submitting my paragraph. I strongly feel that committing errors is really advantageous for the process of learning. Additionally, promptly recognising and acknowledging these blunders proves to be exceedingly useful."

"Efficient acquisition of knowledge. Furthermore, rectifying my mistakes was facilitated by the fact that the ideas I attempted to convey in my paragraph remained vivid in my memory. Upon receiving criticism on my errors, I am compelled to contemplate the intended message of my writing, which subsequently induces fatigue and disinclination towards error correction."

The students expressed their enjoyment of automated feedback due to their appreciation for incorporating technology into their writing course. According to their assessment, writing a paragraph on the computer was more convenient and effortless. Superior to the act of writing with pen and paper in terms of enjoyment. In addition, the participants acknowledged that obtaining prompt feedback on their written work was a source of motivation for them. A participant expressed the following comment:

"Receiving a comprehensive score from the programme was highly motivating for me." On every occasion, I exerted maximum effort to generate an improved paragraph with the intention of achieving the highest possible score, which is 9. Furthermore, when rectifying my mistakes and resubmitting my paragraph, I observed an instantaneous surge in my score, which motivated me to rectify all my problems and produce flawless paragraphs for future tasks."

The students reported experiencing fewer mistakes and improvements in their writing process. Some specifically mentioned:

"The frequency of errors in my writing diminished, and my writing process became more efficient. The generation of words and sentences became more fluid and expeditious. In the initial assessment, I produced less content and encountered numerous punctuations and spelling errors. However, in the subsequent evaluation, when I scrutinized my writing, I observed a reduction in mistakes, particularly in punctuation and spelling. Engaging in extensive paragraph writing during lessons and receiving feedback through QuillBot proved to be highly advantageous for my overall writing proficiency."

RQ2- Is there any advantage and effect of Quillbot as an Artificial Intelligence Evaluation tool on the enhancement of control and experimental group students' writing skills and educational outcomes by comparing the results of the pre-test and post-test?

To examine the influence of automated-teacher feedback on students' analytic writing scores, the pre-test and post-test writing scores of both the experimental and control groups were compared.

Table 1-The table shows two-factor ANOVA analysis of the students' writing scores, the pre-test and post-test averages and standard deviations.

	Pre-test		Post-test	
	M	SD	M	SD
Experimental	11,88	2,112	16,67	3,031
Control	14,21	2,904	13.75	2,863

Based on the data shown in the table, the pre-test scores of the experimental group students were 11.88, while their post-test scores were 16.67. Upon analysing the pre-test and post-test results of the pupils in the control group, they were found to be 14.21 and 13.75, respectively.
Statistics regarding students' English writing exam scores are shown in the table 2 below, categorized by variables of score, test, and group.

Table 2: Tests of Between-Subjects Effects

Dependent Variable: PRE-TEST_POST-TEST

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	280.083[a]	3	93.361	12.333	.000	.287
Intercept	19153.500	1	19153.500	2530.270	.000	.965
GROUP	112.667	1	112.667	14.884	.000	.139
TEST	2.042	1	2.042	.270	.605	.003
GROUP * TEST	165.375	1	165.375	21.847	.000	.192
Error	696.417	92	7.570			
Total	20130.000	96				
Corrected Total	976.500	95				

a. R Squared = .287 (Adjusted R Squared = .264)
0,01-0.09 (small), 0,09-0,25 (medium) and >0,25 (large)

The joint effect of the Test and Group variables on students' scores was found to be significant, $F(1,92)=21.847$, $p<.05$, Partial $\eta^2=0.192$. In other words, being in the control or experimental group has a different impact on increasing the final test scores. The increase in writing final test scores for students in the experimental group was statistically significantly higher compared to students in the control group and it was found statistically significant as $p<.05$.

RQ3: Is there a challenge in implementing an Quillbot for the experimental group students?

Upon comparing the two categories, it becomes evident that the students' unfavourable impressions are far less. The primary aspect of Quillbot that received the most criticism from students was its inability to offer content input.

Additionally, they asserted that the warning messages are challenging to comprehend since they do not explicitly indicate the accurate format of the problem. A participant articulated his or her viewpoint in the following manner:

"Automated feedback solely displays and classifies our errors, but it would be more advantageous if it also offers the correct format." I encountered challenges in identifying the appropriate format of the mistakes that I made due to my inability to comprehend the warning messages.''

The students noted that the comments provided about the organisation and growth aspect was ambiguous. Quillbot utilises colour codes to visually represent the structural components of the essay that has been submitted, including the thesis statement, key ideas, supporting sentences, and ending phrases. Pupils conveyed that the advising messages displayed while clicking the colour codes are redundant and lacking in useful information. A participant expressed his opinion on this matter with the following statement:

"Upon each submission of my paragraph, I consistently received advisory messages regarding the development and organisation of my essay." I believe that these signals lack specificity and fail to provide me with comprehensive information on the organisational components in my paragraph.''

In addition, the participants reported that the programme occasionally produces inaccurate error messages and high level of translation. In relation to this topic, the students provided the accompanying illustrations:

"The programme indicates a grammatical error in the highlighted portion of the sentence, however, there is actually no issue present. Furthermore, I believe that this programme is translating a text at an advanced level, but I need a more basic translation. Translating according to our proficiency level would be beneficial."

"Quillbot issued a repetition warning despite the fact that I used the word just a limited number of times."

A student expressed dissatisfaction with QuillBot due to its limitations on mobile devices. The student mentioned:

" *The application sometimes overlooks errors when used on a mobile phone, prompting the need to switch to a computer for more accurate corrections. The absence of detailed explanations for corrections on the mobile version was highlighted as a drawback, contributing to the perception that studying on a computer is a more efficient alternative."*

RQ4- Is there any effect of the application Padlet for experimental group students' results?

One of the students clarified some points about Padlet:

"The conventional method of submitting handwritten papers to the teacher has been replaced by the utilization of Padlet, allowing our teacher to evaluate our paragraphs at her convenience. This digital approach eliminates the need for paper, promoting environmental sustainability. Subsequently, we engage with QuillBot to refine and enhance our writing, streamlining the overall process."

Another student expressed an opinion about Padlet;

"Through the platform of Padlet, I can engage in collaborative efforts with my peers. This collaborative space facilitates the sharing of writing outcomes and feedback among friends. In preparation for exams, I have the opportunity to review and analyze the results and mistakes of my friends, fostering a collective and supportive learning environment."

DISCUSSION AND RESULT

As per the findings of Turgay Han and Elif Sarı, the study demonstrated that the writing scores of the students in the experimental group showed improvement and reduced their mistakes following the combined automated-teacher feedback (Han & Sari, 2022.). This study assessed the writing accomplishments of the experimental group students and juxtaposed it with the control group, which received comprehensive evaluation from the instructor. The results indicated that there was no statistically significant disparity between the two groups in terms of the overall score they obtained from the analytic scoring scale.

There may be variations in the feedback conditions used in the previous research compared to the feedback circumstances used in the current investigation. Different approaches of obtaining input may uncover conflicting outcomes. The disparity can be explained by the students' reflections. They held the conviction that automated feedback was more effective for learning as it allowed them to promptly address their shortcomings.

In addition, the AWE system offered personalised assistance at any time and location. Providing students with the opportunity to rectify their mistakes before to submitting their assignments for teacher evaluation might have enhanced their autonomy, fostering a learner-centred atmosphere that facilitated independent learning. Furthermore, the disparity between the two groups in terms of the enhancement in grammar and mechanics might also be attributed to the fact that Quillbot identified a far greater number of errors compared to the teacher, therefore heightening the students' consciousness of their own flaws. While the teacher has the skills to offer thorough criticism similar to Quillbot, it is possible that she overlooked certain errors due to exhaustion. The majority of participants held the belief that automated feedback significantly enhanced their overall writing proficiency. The participants conveyed that immediate feedback motivated them to complete assignments promptly, driven by their curiosity about their performance. Additionally, they were motivated to revise their compositions further as their grades improved upon addressing the problematic areas. Furthermore, rather of grading several papers on a daily basis, EFL instructors may allocate their time and effort towards seeking out methods to enhance the efficacy of their writing teaching for students.

It is important to acknowledge that the success of AWE integration relies on several aspects, including students' proficiency with technology and instructors' preparedness and eagerness to include technology into their teaching.

Stephanie Link, Mohaddeseh Mehrzad, and Mohammad Rahimi suggest that future research in AWE (Automated Writing Evaluation) should incorporate consistent and standardised measurements of the writing construct(Link et al., 2022) . This would enable meaningful comparisons across different studies and enhance the overall value of the research. The revelation of AWE feedback can be enhanced. What is lacking in this analysis is a criterion, or a group of criteria, that assists in evaluating constructs that are of significant importance to SLA scholars, such as genre knowledge, structure, and idea growth.

The implications of this study's findings should be considered in view of various constraints. Initially, the current investigation failed to manage potential factors that may have affected the pupils' independent utilisation.

Sarıcaoğlu and Bilki mention that regarding AWE, it is important to consider factors such as error correction backgrounds, motivation levels, assignment assessment standards, and other related aspects. The study lacks information regarding the quantity of feedback given by teachers on students' English language in their written assignments and whether the linguistic quality influenced the grading of these assignments (Saricaoglu & Bilki, 2021). The importance that students place on the English language in their assignments could be influenced by the importance given to language by their professors, potentially affecting the students' utilization of Automated Writing Evaluation (AWE). Future research endeavours may benefit from including the measurement of these potential parameters.

Furthermore, although the results indicate that the instructor's involvement is crucial for students to effectively utilise AWE, it remains uncertain whether specific teacher tactics and styles were most helpful in enhancing students' writing with AWE.

Based on the available evidence, it is clear that teachers who hold a favourable view of incorporating innovative approaches in their lessons are more inclined to invest additional effort to make their instruction more impactful. Establishing examples and delivering lectures on the utilization of computer technologies is of paramount significance. Moreover, it is crucial to allow prospective teachers to experiment with these tools, spend time familiarizing themselves with them, and contemplate how they can integrate them into their lessons. Consequently, this experience will prompt them to adopt a positive mindset and enthusiastically embrace the adoption of new technological resources for use within the classroom (Ateş Özdemir, 2013).

LIMITATIONS AND IMPLICATIONS

A limitation of this research is the experimental focus on solely 48 participants within a preparatory class. Expanding the experiment to include a larger and more diverse sample, involving students from various universities, could enhance the generalizability and comparability of the results.

Future research might employ other metrics of accuracy and explore the impact of AWE corrective techniques. Feedback can enhance students' cognitive and metalinguistic development and its relationship to independent learning.

The present study possesses several constraints that must be taken into account while evaluating its results. In the present study, the participants consisted of motivated students enrolled in English Preparatory Classes. Open to receiving any sort of critique that would assist in enhancing their writing proficiency. Subsequent research may be undertaken on non-preparatory English lessons and the outcomes can be juxtaposed with those gained from all academic disciplines. Furthermore, due to the study being conducted in an instructional context, it was not feasible to utilise a genuine experimental research design. Utilising arbitrary choice and participants’ assignment may lead to more dependable outcomes.

Further study should explore the possibility of augmenting the participant pool and examining the impact of AWEs) on advanced learners. Furthermore, future research should investigate the methodologies that teachers can employ to facilitate peer-review activities. Expanding the range of qualitative data, such as conducting classroom observations and interviews can be advantageous for evaluating the effectiveness of an AWE programme. One further constraint of this study is the absence of questionnaire implementation, potentially impacting the participants' replies. Hence, it would be

more advantageous for further investigations to employ an anonymous questionnaire in order to guarantee the dependability of the survey.

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APPENDIX-1: SEMI-STRUCTURED INTERVIEW QUESTIONS

1. Do you think Padlet is useful in improving your writing skills?
2. Are you willing to try to use AI tools such as Quillbot for academic English learning in the future?
3. What do you think of the automated evaluation system of Quillbot? Do you think it provides consistent scores with the human graders?
4. What do you think of the feedback and error analysis system of this tool? Any suggestions?
5. What were the most interesting things/advantages in this implementation?
6. What were the most difficult things/disadvantages in this implementation?
7. Compared to classroom, did you like writing on Padlet? What was the difference between feedback on a paper and feedback on the application?
8. Do you want to add more information about this implementation?

APPENDIX-2: WRITING RUBRIC BY KET

B1 Preliminary Writing Examiners use the following assessment scale, extracted from the one on the next page:

B1	Content	Communicative Achievement	Organisation	Language
5	All content is relevant to the task. Target reader is fully informed	Uses the conventions of the communicative task to hold the target reader's attention and communicate straightforward ideas.	Text is generally well organised and coherent, using a variety of linking words and cohesive devices.	Uses a range of everyday vocabulary appropriately, with occasional inappropriate use of less common lexis. Uses a range of simple and some complex grammatical forms with a good degree of control. Errors do not impede communication.
4	*Performance shares features of Bands 3 and 5.*			
3	Minor irrelevances and/or omissions may be present. Target reader is on the whole informed.	Uses the conventions of the communicative task in generally appropriate ways to communicate straightforward ideas.	Text is connected and coherent, using basic linking words and a limited number of cohesive devices.	Uses everyday vocabulary generally appropriately, while occasionally overusing certain lexis. Uses simple grammatical forms with a good degree of control. While errors are noticeable, meaning can still be determined.
2	*Performance shares features of Bands 1 and 3.*			
1	Irrelevances and misinterpretation of task may be present. Target reader is minimally informed.	Produces text that communicates simple ideas in simple ways.	Text is connected using basic, high-frequency linking words.	Uses basic vocabulary reasonably appropriately. Uses simple grammatical forms with some degree of control. Errors may impede meaning at times.
0	Content is totally irrelevant. Target reader is not informed.	*Performance below Band 1.*		

Biographical notes

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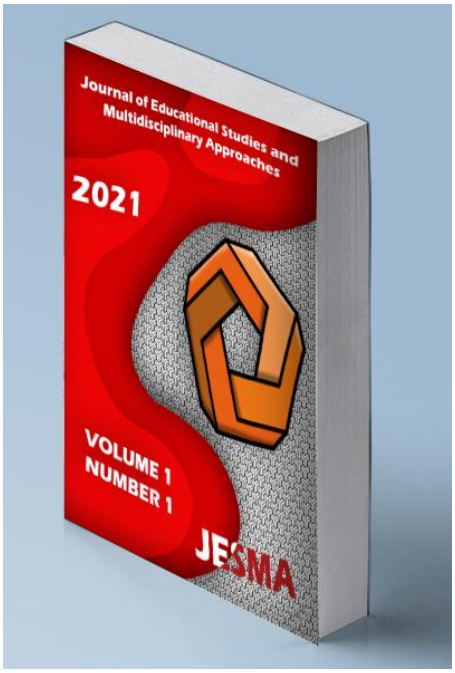

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SWOT Analysis of the Use of ChatGPT in Education

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ABSTRACT

In recent years, artificial intelligence technologies that take on human abilities or jobs have become a significant issue. ChatGPT, a chatbot developed by the OpenAI artificial intelligence company, has been one of the most important developments in this field. Educational environments directly affected by these technological developments have gained a new dimension. The introduction of artificial intelligence technologies into the service of the whole world and their use in the educational environment has made it necessary to examine the strengths and weaknesses of the current situation, the opportunities it offers and, threats it creates. The aim of this research is to examine the use of ChatGPT in education using SWOT analysis. A qualitative research method was used to reveal the thoughts of the participants regarding the use of ChatGPT in education. The study group is composed of educators who use GPT in educational environments. The data was obtained with the semi-structured interview technique to be used as a data collection tool. The data were analyzed by content analysis. Within the scope of the research, the perspectives of the participants on the strengths and weaknesses, opportunities, and threats of the use of GPT in education are presented in written and visual form.

Keywords: Artificial Intelligence, ChatGPT, Education, SWOT Analysis.

Introduction

Artificial intelligence developments continue to constitute an important area of study on this subject. Artificial intelligence (AI) can be defined as the field that focuses on the programing of so-called intelligent machines that resemble human intelligence at a certain level and can provide the same responses (Verma, 2018). McCarthy et al. (2006), who first used the term AI, based on the assumption that learning can be defined by any aspect and feature of intelligence and that a machine can be built to imitate it. Based on the definitions in the literature, Popenici and Kerr (2017) defined AI as a computer system that can perform human operations, such as learning, adaptation, synthesis, self-correction, and providing information for complex tasks. Artificial intelligence programs called chatbots imitate human-user communications (Johari et al., 2019). Chatbots enable user interaction through text and speech (Meço & Çoştu, 2022). To understand and respond to customer requests, companies make use of technologies like Natural Language Processing (NLP) (Daniel et al., 2020; Ghaleb et al., 2022). The capability of chatbots to interact with users in a human-like manner while offering guidance, help, and even educational support is one of their most important features (Abdulkader & Al-Irhayim, 2022; Liu, 2024; Pérez et al., 2020). Additionally, they have been applied in educational contexts to improve student learning outcomes and offer individualized support (Liu, 2024; Pérez et al., 2020). ChatGPT, a chatbot application, is a chatbot based on the GPT-3 language model developed by OpenAI. It has been stated that ChatGPT applications process information accurately, efficiently, systematically, and informatively, representing the most advanced level of artificial intelligence and driving educational reform (Zhai, 2022).

It has been stated that artificial intelligence, which is effective in many areas of life, has also affected the field of education (Alanoğlu & Karabatak, 2021) and will continue to transform education (Sadiku et al., 2021). The requirement for specific learning experiences to meet the needs and learning preferences of each individual student is one of the major challenges facing education today. To develop individualized learning methods for students that adjust to their pace and preferences, artificial intelligence (AI) analyzes enormous volumes of data (Abuhassna, 2024;, Sadiku et al., 2021). Better learning results are eventually the result of this personalization, which also increases student motivation and engagement. Another challenge in education is the assessment process. AI proves its usefulness in providing personalized feedback and evaluating performance using quantitative and qualitative information (Samarakou et al., 2016). It offers innovative assessment methodologies that can provide real-time feedback, track student performance, and offer insights into areas where students may need additional support (Calatayud et al., 2021).

With the development of systems based on artificial intelligence, the types of people to be trained and, the structure and functioning of education have changed. In particular, after the pandemic period, it is predicted that there will be an increase in studies in the field of artificial intelligence and

that this will be a solution to possible educational problems (Coşkun & Gülleroğlu, 2021). When the literature is examined, studies on the use of AI in education (Akgün & Greenhow, 2022; Alanoğlu & Karabatak, 2020; Akdeniz & Özdinç, 2021; Chen et al., 2020; Çoşkun & Gülleroğlu, 2021; Deveci Topal et al, 2021; Frye, 2022; Fırat, 2023; Gürsakal et al., 2022; Güzey et al., 2022; İşler & Kılıç, 2021; Meço & Çoştu, 2022; Ouyang & Jiao, 2021; Popenici & Kerr, 2017; Verma, 2018) support this. Among the studies, it has been observed that only the studies on ChatGPT, an artificial intelligence application, reveal its competence in the field of education and focus on ethics (Cotton et al., 2023; Karakoç-Keskin, 2023; Kızılgeçit et al., 2023; Tekin, 2021; Savelka et al., 2023; Susnjak, 2022; Zhai, 2022), and the opinions of students on its use in education are explored (Aktay et al., 2023).

Aktay et al. (2023) sought to reveal student views on the use of ChatGPT in education. As a result of the study, in which the study group consists of 15 students studying in the 4th grade, it has been stated that the students find the use of ChatGPT in education interesting and fun; that the inclusion of AI in teaching increases academic achievement and provides more information than traditional printed sources such as textbooks.

The study conducted by Cotton et al. (2023) with the contributions of ChatGPT aimed to investigate the opportunities and challenges, possible risks and gains of using ChatGPT at the university level. This study proposes strategies to enable universities to use AI in an ethical and responsible manner to address the challenges of detecting and preventing academic dishonesty. This study is meant to serve as a wake-up call for university staff to pay attention to ways to guide their evaluations and ensure that academic dishonesty is clearly explained to students and minimized.

Susjnak (2022) stated that his study, which evaluated ChatGPT' s ability to perform high-level cognitive tasks and produce text indistinguishable from human-generated text, raises concerns about the potential use of ChatGPT as a tool for academic misconduct in online exams. The study concluded that educators and institutions must carefully evaluate and investigate how ChatGPT can be used ethically and responsibly.

When studies on the use of ChatGPT in education through **SWOT (Strengths**, **Weaknesses, Opportunities**, **Threats**) analysis are generally evaluated, it has been stated that they are conducted through a literature review on a specific subject (Farrokhnia et al., 2023). In order to perform SWOT analysis in this study, the opinions of educators using ChatGPT in education are explored. **SWOT** analysis is the examination of an organization's strengths and weaknesses, opportunities for growth and development, and external threats. **SWOT** analysis consists of collecting and evaluating important data, categorizing the collected data into four categories: strengths, weaknesses, opportunities and threats, developing a **SWOT** matrix, and incorporating **SWOT** analysis into the decision-making process

(Gretzky, 2010). An organization, strategy, project, or business activity can be evaluated using **SWOT** analysis. Therefore, **SWOT** analysis is crucial for assessing an organization's strengths, weaknesses, opportunities, and threats. Opportunities and strengths are useful in achieving organizational goals. Threats and weaknesses are detrimental to achieving corporate goals (Gürel & Tat, 2017). As a technique commonly used in commercial evaluations, **SWOT** analysis has also been applied in educational studies (Akçöltekin et al., 2022; Çelikoğlu et al., 2023; Emek, 2021; Ezin, 2021; Kılıçoğlu &Aydemir, 2022; Leontyeva et al., 2019; Pilar et al., 2015; Tekin & Yalpar-Yelken, 2022; Yelken et al., 2012).

As a result of the development of systems based on artificial intelligence, educational goals and situations have changed. Educators are the most important group that needs to adapt to developments (Çoşkun & Gülleroğlu, 2022). It is inevitable for educators, who are the natural implementers of programs, to use AI applications in educational environments. For this reason, it is thought that taking the opinions of educators about the strengths and weaknesses, opportunities and, threats related to the use of ChatGPT in education, which is an artificial intelligence application, and addressing them in line with **SWOT** analysis will contribute to the literature. In this study, it is aimed to determine the current state of the use of ChatGPT in education using **SWOT** analysis method. For this purpose, the following subproblems were identified:

1. According to educators' opinions, what are the strengths of using ChatGPT in education?

2. According to the opinions of educators, what are the weaknesses of using ChatGPT in education?

3. What are the opportunities of using ChatGPT in education according to educators' opinions?

4. What are the threats to using ChatGPT in education according to educators' opinions?

Research Objective

This study aims to examine the use of ChatGPT in education through SWOT analysis based on educators' opinions. Thus, by determining the strengths and weaknesses of the method, it will be possible to have an idea about how and in which areas the strengths can be used, weaknesses can be strengthened, possible opportunities can be evaluated in the most efficient way, and measures can be taken against possible threats. ChatGPT was analyzed in line with the SWOT analysis by consulting the opinions of educators.

Methods and Materials

Research Model

This study employs a basic qualitative research design. Researchers may not always conduct phenomenological, theory-building, discourse analysis, or ethnographic studies. Instead, a researcher can conduct qualitative research with an interpretive approach (Merriam, 2009 as cited in Tekin & Yanpar- Yelken, 2022). In this study, the basic qualitative research design was used to examine educators' views on the strengths, weaknesses, opportunities and threats of using ChatGPT in education through SWOT analysis.

Data Collection

A survey form was used to collect data for the study. The survey form was prepared based on the related literature. The survey form developed by the researcher was shaped into four themes under the titles of "Strengths of using ChatGPT in education", "Weaknesses of using ChatGPT in education", "Opportunities provided by using ChatGPT in education" and "Threats of using ChatGPT in education" and consisted of a total of 4 structured open-ended questions under these titles. The validity study was conducted by consulting an expert who is a lecturer at the Department of Curriculum and Instruction. Data were collected via email between January 15 and February 1, 2024.

Data Analysis

The author carefully reviewed the survey forms. Then, the data were categorized into four SWOT domains: strengths, weaknesses, opportunities, and threats. The MAXQDA 2018 software was used to process the data. The program was then used to enter survey transcriptions. The data obtained through the data collection tool were subjected to content analysis. The content analysis process includes the following steps: constructing themes for analysis, developing a codebook, selecting the content to be analyzed, coding the content, conducting the analysis, and reporting the findings. By examining the data, the codes were developed. Codes indicating how frequently the study variables occurred are shown. In addition, this information was supported by direct quotations. Literature review conducted to assess the study validity and reliability. The research design, study group, data collection tool and data analysis were explained in detail. The fact that the researcher of the study and the data can be accessed upon request is important in terms of ensuring the external reliability of the study.

Sampling

The study group was selected according to purposive sampling, which is a non-probability sampling method. This study is composed of the participants (n = 15) who are educators using ChatGPT

in education. To enhance the understanding of the questions asked, a purposive sampling technique was employed, with participants being invited from individual interviews via email because they satisfied at least two of the following conditions: 1) teachers working at any primary/secondary/high school or university, 2) they use ChatGPT in any course during teaching 3) have academic studies on using ChatGPT in education. The demographic information about the participants is presented in Table 1.

Table 1. *Demographic characterictis of the participants*

Participants	Country	Field of study
E1	Türkiye	Education
E2	China	Medicine
E3	Türkiye	Education
E4	Türkiye	Education
E5	The USA	Tourism
E6	The USA	Education
E7	The USA	Education
E8	The USA	Education
E9	Türkiye	Education
E10	Türkiye	Education
E11	The USA	Education
E12	The USA	Education
E13	The USA	Education
E14	The USA	Education
E15	The USA	Education

Ethical Considerations

All the rules stated in the "Higher Education Institutions Scientific Research and Publication Ethics Directive" were followed in the entire process from planning, implementation, data collection to the data analysis. None of the actions specified in the second section of the Directive, "Scientific Research and Publication Ethics Actions" have been carried out.

During the writing process of this study, scientific, ethical and citation rules were followed; no falsification was made on the collected data. For qualitative data, the participants were informed that there was no obligation if they decided to opt-out at any time.

Ethical review board name: Scientific Research and Publication Ethics Committee of Necmettin Erbakan University
Date of ethics review decision: 05/01/2024
Ethics assessment document issue number: 2024/12

Results

In this section, the findings are presented in line with the scope of the research.

3. 1. Opinions on the Strengths of Using ChatGPT in Education

In SWOT analysis, strengths are the aspects that make the method more effective than other methods. According to the opinions of the educators, their views on the strengths of using ChatGPT in education were categorized and frequency values are shown in Table 2:

Table 2. *Strengths of using ChatGPT in education according to educators' views*

Strengths	***f***
Providing personalized learning	11
Giving instant feedback	11
Caring for individual differences	6
A wealth of knowledge	2
Developing students' creativity	1

According to the opinions of the educators, common categories were determined in line with their views on the strengths of using ChatGPT in education, and 5 common categories and their frequency values are presented in Table 2. According to Table 2, when we look at the opinions of educators regarding the strengths of using ChatGPT in education, it is seen that the categories of providing personalized learning (f=11), giving instant feedback (f=11), caring for individual differences (f=6), wealth of knowledge (f=2) and developing students' creativity (f=1) were reported. Sample statements from educators' opinions are as follows:

E1: "From my own short experience with GPT I found that it can provide my students with personalized learning and feedback through adapting to each student's needs… Another positive use of GPT is enabling my students to get instant feedback and answers to their questions, instead of waiting for teacher availability."
E8: "GPT can provide personalized learning experiences, instant feedback, and a wealth of knowledge"
E12: "Personalized learning: GPT can be used to create personalized learning experiences for each student, tailored to their individual needs and interests."
E14: "GPT can be used to help students develop their creativity and communication skills by providing them with tools for generating text, translating languages, and creating different types of content."

3. 2. Opinions on Weaknesses in Using ChatGPT in Education

In SWOT analysis, weaknesses are the factors that create obstacles to the use of ChatGPT in education. According to the opinions of the educators, the views they expressed about the weaknesses of using ChatGPT in education were categorized and frequency values are shown in Table 3.

***Table 3**. Weaknesses in using ChatGPT in education according to educators' views*

Weakness	***f***
Reliability of the product	13
Corrupting social interactions	7
Undermining students' thinking skills	5
Ready-made information	2
Generating biased outputs	2
Security and privacy problems	2

Common categories were determined in line with the opinions of educators regarding the weaknesses of using ChatGPT in education, and the 6 common categories and their frequency values are shown in Table 3. According to Table 3, product reliability (f=13) is the most common category. The other categories include corrupting social interaction (f=7), undermining students' thinking skills (f=5), using ready-made information (f=2), generating biased outputs (f=2), security and privacy problems (f=2). Below are examples of educator opinions on the weaknesses of using ChatGPT in education:

E7: "Another weakness is that overdependence on GPT can undermine students' critical thinking and knowledge retention. If students become reliant on simplistic GPT explanations, they may not learn to solve challenging problems or draw connections between concepts."
E9: "GPT is not perfect and may produce texts that are inaccurate, irrelevant, or plagiarized from existing sources"
E10: "GPT may also lack the human touch and empathy that are essential for effective teaching and learning"
E11: "Bias: GPT is trained on a massive dataset of text and code, which may contain biases. This can lead to GPT generating biased outputs."
E13: "Accuracy: GPT is still under development, and its outputs can sometimes be inaccurate or misleading."

3. 3. Opinions on Opportunities Provided by the use of ChatGPT in Education

In SWOT analysis, opportunities are those that increase the effect of the elements that make the application effective and reduce the effect of weaknesses. According to the opinions of educators, opportunities provided using ChatGPT in education are categorized and, frequency values are shown in Table 4.

***Table 4.** Opportunities provided using ChatGPT in education to educators' views*

Opportunities	***f***
Saving time	10
Accessibility	10
Providing an interactive learning	7
Fostering innovation and collaboration	2
Providing convenience in programing	1

Common categories were determined in line with the opinions expressed by educators regarding the opportunities offered using ChatGPT in education, and the 5 common categories and their frequency values are shown in Table 4. According to Table 4, it can be seen that they expressed their opinions in the categories of saving time (f=10), accessibility (f=10), providing an interactive learning environment (f=7), fostering innovation and collaboration (f=2) and providing convenience in programing (f=1). Examples of educators' views on the opportunities provided by the use of ChatGPT in education are as follows:

E1: "There are many opportunities in using GPT for students, such as the ability to make learning more engaging and interactive through developing fun natural interaction, and to create conversations that feel rewarding and human-like. Additionally, the new GPT can improve accessibility and inclusion for more students with diverse needs."
E8: "GPT can also enable more inclusive and diverse education, where learners can interact with texts in different languages, cultures, and perspectives"
E9: "GPT can offer new possibilities for open education, where learners can access high-quality content and support from anywhere and anytime"
E12: "GPT can also foster innovation and collaboration, where learners can co-create texts with the AI and share them with others."

3. 4. Opinions on Threatening Aspects of ChatGPT Use in Education

In SWOT analysis, threats are elements that the application directly or indirectly affects negatively. According to the opinions of educators, their views on the threatening elements of ChatGPT use were categorized and frequency values are shown in Table 5.

Table 5. *Threatening aspects of ChatGPT use in education*

Threats	***f***
Plagiarism	13
Students' dependency on ChatGPT use	7
Job displacement	6
Digital divide	3
In-app advertisements	1

Common categories were determined in line with the opinions of educators regarding the threats posed by the use of ChatGPT in education, and the 5 categories and their frequency values are shown in Table 5. According to Table 5, it can be seen that the respondents expressed opinions in the categories of plagiarism (f=13), students' dependency on the use of ChatGPT (f=7), job displacement (f=6), digital divide (f=3), and in-app advertisements (f=1). Sample statements from educators' opinions are as follows:

E1: "Some of the ethical issues include issues relating to protecting users' privacy and data, possibility of bias and discrimination of the GPT against the users, the intellectual property of the work produced, the level of reliability of the texts developed by the GPT, and the issue of reliance of users on GPT to create work. The social issues include the absence of the human element in their communications with

the GPT, affordability, equal access to AI language models for all students, and the lack of inclusivity and equity of AI language models like GPT."
E2: "GPT may undermine the role and value of human teachers and educators, who may feel threatened or replaced by the AI"
E4: "GPT may also create a digital divide, where learners who have access to the AI have an unfair advantage over those who do not"
E6: "People's thoughts can be manipulated too much, ChatGPT in-between advertising practices can be harmful"
E14: "Academic dishonesty: GPT can be used to plagiarize and cheat on assignments, which could erode academic standards."
E15: "Job displacement: As GPT-powered tools become more sophisticated, they could displace human teachers and other education professionals."

Discussion and Conclusion

According to the opinions of the educators, among the opinions put forward regarding the strengths of using ChatGPT in education, the most common view was that it enables individualized teaching, and individual differences were considered. The result of this research coincides with the result of the research conducted by Agustini (2023). The study concluded that ChatGPT can provide immediate feedback, self-reflection and self-assessment, language practice and help students gain confidence and skills to become self-directed learners. Ekoç- Özçelik& Elgün- Gündüz (2023) stated that ChatGPT is a useful educational tool because it allows students to receive immediate feedback on their work and enhances their comprehension of the material. The results of this study align with the conclusions presented in other articles addressing the strengths associated with ChatGPT (Farrokhnia et al., 2023; Karaköse & Tülübaş, 2023; Lee et al., 2024; Mhlanga, 2023; Park, 2023, Prasetya & Sharif, 2023, Satir&Korucu, 2023).

According to educators' views, the weaknesses of using ChatGPT in education are the weakening of social interaction and the reliability of the products developed by ChatGPT. Lelepardy (2022) stated that ChatGPT is a computer-controlled tool that provides contextual and consistent responses, and the absence of social interaction, which requires direct interaction with native speakers or experienced teachers supports the views on the weaknesses of the study. In his literature review, Sallam (2023) concluded that the information produced by ChatGPT is not scientifically accurate and does not have a reliable content. Elkhatat (2023) stated that data for versions 3.5 and 4.0 that are valid until September 2021 limit the restricted knowledge base of GhatGPT, which is currently offline. Another weakness of using ChatGPT is that it dulls the thinking skills. Kasneci et al. (2023) stated that students can use ChatGPT too much and that the information produced without effort can negatively affect critical thinking and problem-solving skills. The results of these studies are similar to those of the current study.

According to the opinions of educators, providing an interactive learning environment, saving time, easy access and ease in programing are the opinions they put forward regarding the opportunities

of using ChatGPT in education. The research findings of this study on opportunities are supported by the literature on ChatGPT in the field of education (Farrokhnia et al., 2023; Frye, 2022; Pavlik, 2023; Zhai, 2022). It is possible to see the perspective presented by Adeyato (2023). It has been stated in his study that the use of ChatGPT while having access to a greater range of information that is targeted to their interests saves time and facilitates communication similar to human speech.

According to the opinions of educators, threats of ChatGPT use in education include students' addiction to using the application, plagiarism, unemployment, the digital divide, in-app advertisements. Similarly, Savelka et al. (2023) and Zhai (2022) stated that it is inevitable for students to use ChatGPT to complete their homework. It has been stated that most ChatGPT users are students (Lelepardy, 2022). Susnjak (2022) stated that the use of ChatGPT poses a threat to the reliability of university- level online exams. As in the current study, Watters and Lemanski (2023) emphasized that the negative view of the ChatGPT literature stems from ethical concerns. Rudolph et al. (2023) highlighted the use of ChatGPT in terms of plagiarism in learning, teaching and assessment processes in higher education. Cotton et al. (2023) stated that ChatGPT raises concerns about academic honesty and plagiarism. In the study conducted by Karakoç- Keskin (2023), the theme of plagiarism was addressed within the scope of the concerns included in the ChatGPT agenda in Turkey. In this study, it has been stated that the use of ChatGPT in homework and projects by students in education and its utilization in online exams has been expressed as a concern for education professionals. In the present study, the emphasis on plagiarism was in line with the results of previous studies. In addition, in this study, it has been stated that one of the concerns raised about using ChatGPT in business life is the fear that unemployment will increase. Lock (2022) stated that early users of ChatGPT predicted that it would eventually replace occupations in a variety of content creation fields, including those held by programmers, teachers, playwrights, and journalists. These results support the theme of threats posed by ChatGPT in the recent study.

Limitations and Recommendations

In line with the findings obtained within the scope of the research, the following suggestions can be made:

- Studies should be conducted in which the use of artificial intelligence applications in education is evaluated using different techniques including detailed analysis such as SWOT analysis.

- The weaknesses and threats can be considered in the process of using ChatGPT in education and measures can be taken. It is important to educate educators and students about the potential risks and limitations associated with ChatGPT. Legal and ethical compliance with ChatGPT can be maintained by establishing ethical criteria for its proper use. To effectively control ChatGPT use,

institutions should consider adding usage rules to their learning environments. Stressing ChatGPT's additional role as a tool rather than an alternative to traditional teaching techniques is crucial.

- Researchers who will conduct studies on this subject can be recommended to conduct studies with larger samples and groups in which all stakeholders, such as teachers, students, administrators and parents are considered.

- SWOT analysis can be applied to stakeholders at certain intervals to contribute to taking practices and measures that will increase the utilization of AI developments in education, and the results can be used in development and improvement studies.

Authorship contribution statement

Fatmanur Budak Durmuş: Writing – review & editing, Writing – original draft, Methodology.

Declaration of competing interest

None.

Data availability statement

The original contributions presented in the study are included in the article. Supplementary material, further inquiries can be directed to the author.

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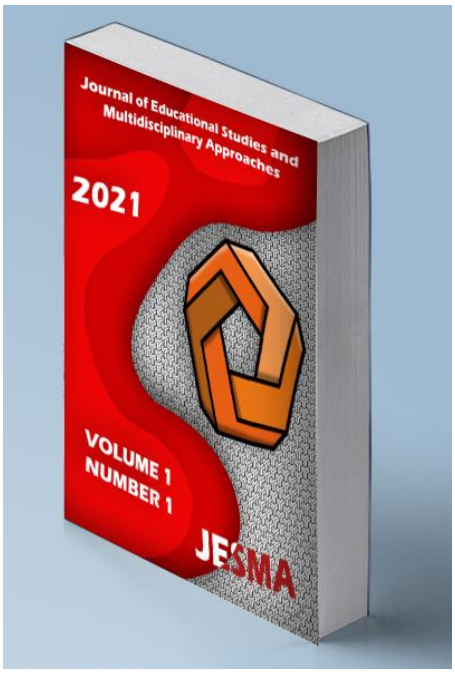

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English Language Teachers' Insights on the Influence of *ChatGPT* on Professional Well-being

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English Language Teachers' Insights on the Influence of *ChatGPT* on Professional Well-being

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ABSTRACT

This study explores the influence of *ChatGPT*—an AI-powered Large Language Model (LLM)—on the professional well-being and work-life quality of English language teachers in online teaching environments. By leveraging a qualitative case study approach, semi-structured interviews were conducted with six English language teachers to evaluate their experiences with *ChatGPT* in diverse teaching practices, such as lesson planning, material development, and student feedback. The study data revealed that *ChatGPT* significantly reduced teachers' workload, enhanced time management, and improved teaching efficiency, enabling educators to focus more on student interaction and innovative aspects of teaching. Furthermore, participants reported that *ChatGPT* contributed to reducing their stress levels and increasing job satisfaction by streamlining their routine tasks, such as administrative duties. However, teachers raised concerns about the potential over-reliance on AI, as well as the accuracy of information generated by *ChatGPT's* older versions. The study also provides detailed recommendations for the responsible integration of AI in education, highlighting the importance of ongoing teacher training and transparent usage guidelines. The study contributes to the growing body of literature on AI's pervasive use in education by offering practical insights into the benefits and challenges of using *ChatGPT* to support teachers' well-being.

Keywords: Teacher Well-being, Artificial Intelligence (AI), Large Language Models (LLMs), *ChatGPT*, Online Teaching.

Introduction

During the last few decades, the widespread use of artificial intelligence (AI) algorithms has transformed all real-life domains, including social interactions, research, socioeconomic advancements, finance, healthcare, and education. In particular, the educational processes have significantly improved due to the emergence of Large Language Models (LLMs) such as OpenAI's *ChatGPT*, leading educators to introduce novel methodologies in their pedagogical styles (Laato *et al.*, 2023). *ChatGPT* is an advanced AI model designed for generating text, in which the system provides human-like text based on the inputs known as prompts. It can help with an extensive range of educational tasks, such as creating customized lesson plans, providing immediate feedback on students' work, and delivering assistance during live classes (Kartal, 2023). AI technologies can address different challenges encountered by educational institutions, such as managing large classrooms, providing students with customized learning experiences, and handling administrative procedures (Adiguzel *et al.*, 2023). ChatGPT can evaluate students' information and provide them with immediate feedback while personalizing the material for each distinctive learner (Kartal, 2023). Moreover, it can also help the teachers produce stimulating academic content to capture students' attention.

Since the advent of the COVID-19 pandemic outbreak, numerous educational institutions have transitioned to online and hybrid teaching methods. Therefore, teachers need novel skills and their jobs require different skills. This is also related to their professional well-being. Occupational health is a complex idea that incorporates satisfaction, stress, relations between professional and personal life, and career development (Leung et al., 2009). On the other hand, organizational health—significant to the educators' professional well-being—is specified by various factors, including workload, support of colleagues and administration, availability of resources, and professional development. From this perspective, the introduction of AI-driven tools like *ChatGPT* opens a new horizon for those aspects that may impact teachers' professional experience and well-being in multiple ways. More specifically, the framework of *Cognitive Load Theory* (CLT) is used to understand working memory limits and make inferences about instructional design implications (Sweller et al., 1998). One of the critical components of CLT is that learning pathology will take place if the cognitive load exceeds inherent limits. In contrast, the intrinsic load may only be modified by a focus on instructional design aimed at minimizing additional cognitive load or increasing pertinent processes. In this context, tools like *ChatGPT* derived from AI could be utilized to automate everyday tasks so as to reduce the cognitive load on teachers and enable them to spend their energies on performing innovative or critical tasks. Similarly, the reduced cognitive load has the potential to improve teacher well-being by minimizing stress and creating new pathways for professional growth (Hawthorne et al., 2019).

Based on the above, the current research seeks to synthesize the English language teachers' perspective regarding the impact of *ChatGPT* on their professional welfare. Hence, the study aims to investigate the effects of *ChatGPT* on workload, instruction efficiency, professional growth and stress levels among a selected group of teachers currently involved in teaching English in an online setting. Thus, the study offers an appropriate scenario through which the utilization of AI models in teaching can be explored due to the unique requirements and concerns regarding online teaching. The following two research questions guide the study:

RQ1. How do English language teachers use *ChatGPT* to improve their professional well-being?

RQ2. How do English language teachers perceive the role of *ChatGPT* on their professional well-being?

Literature Review

Teacher well-being: importance and challenges

Teacher effectiveness is a broad concept associated with teachers' job satisfaction, instruction stress, work-family balance, and promotional avenues (Klassen & Chiu, 2010). Over the years, it has been central to ensuring quality education as well as a healthy learning ecosystem. Besides, data analysis indicates that teachers' health and workplace productivity, as well as students' learning outcomes, are directly associated with their well-being (Braun *et al.*, 2018). However, teachers may encounter stress and burnout for multiple reasons, such as working overtime, inadequate resources, lack of support from the school administration or authorities, and high expectations from school authorities and society in general. Some other associated risks faced by teachers include overcrowded classes, diversity, demanding clients' requirements, standardized curricula, and profusion rates. As a result, stress and burnout lead to the following adverse effects. This form of stress impacts teachers' health negatively, leads to the prevalence of known mental illnesses, causes job dissatisfaction, and increases teacher exhaustion rates. Hence, while the senior management teams and board of trustees set elevated goals for students' achievement, high turnover influences uniformity in teaching outcomes and school communities (Loeb et al., 2005). Moreover, recruiting and training qualified teachers is a costly affair that leads to the drainage of school finances and other resources. Due to teacher burnout, their chronic physical health issues result in demotivation, reduced individual attention, poor performance, and demoralization. It negatively impacts students' motivation, with emotional exhaustion and depersonalization playing a significant role in the transmission of burnout to students (Shen *et al.*, 2015). Consequently, the students suffer low GPAs, leading to a negative feeling about their school. This situation affects their behavior and academic performance cyclically.

Therefore, it is essential to address and enhance teachers' welfare to sustain the school system and improve students' performance. In this scenario, several measures must be adopted, such as evaluating the emotional state of teachers, providing staff with stress management techniques, and creating a healthy environment for students. Furthermore, adequate load, accommodation of necessities, and an administrative work ecosystem are imperative for maintaining a healthy teaching staff. When teachers are promoted, their efficiency increases due to the associated appreciation. Improving the quality of teachers' experience is a noble endeavor, and it is an essential process for improving the overall state of the educational system in the future.

JD-R model to teaching

From the standpoint of teaching and learning environments, the *Job Demands-Resources* (JD-R) model enables us to distinguish between specific demands and resources that influence teacher burnout. Some of the issues experienced by the teachers include heavy workload, behavior management in class, and emotional effort (Adamson & Sloan, 2022). Potential resources could be administrative support, teaching aids, professional development, and working conditions. Through the JD-R model, educational institutions employing teachers can learn to modify or create approaches to minimize job demands as well as improve protective factors to enrich their health. Some research studies recommend that organizational interventions aimed at enhancing teacher well-being by addressing job demands through elevating resources can be effective. For instance, implementing stress management training and providing psychological health consultation can reinforce teachers' perceived job control and work-related resources, eventually benefiting their health and well-being (Zhai *et al.*, 2011).

Essential elements associated with job stress for teachers are overcrowded classes, students' diverse needs, time limitations, bureaucratic work, and elevated performance expectations (Al-Adwan, 2023). On the contrary, various resources can help in furthering the teaching and administrative environment,

such as good leadership support, supportive work settings, career development, and access to technology. Managing these demands and resources is vital to minimize teacher burnout and support an effective work environment.

Role of AI in enhancing teacher well-being

AI has introduced many tools and applications into education, ranging from the automation of administrative tasks to transitioning to smart learning systems. First, AI can help teachers alleviate some of their issues, such as collecting busy data (Al-Qaysi, 2020) and offering feedback to all the students. Consequently, these tools save more time for the quality teaching and learning processes.

Furthermore, these benefits extend further, with a significant number of advantages for teachers, including such opportunities as automating routine work, adapting the instruction to meet the needs of diverse students, and collecting essential data regarding student performance (AlAfnan et al., 2023). These tools can be helpful in designing the study content and activities in a more interactive and student-oriented manner. However, some limitations exist, such as a lack of adequate training to use AI tools, data protection and integrity issues, and a risk of over-dependence on AI to the extent of avoiding beneficial interaction with students and other stakeholders (Kartal, 2024).

Besides, generative AI tools like *ChatGPT* have unique features that can be helpful to teachers in lesson planning and feedback provision, as well as in responding to students' questions. These tools can assist in saving time associated with these tasks and thus can minimize stress to allow teachers to concentrate more on the active and innovative aspects of teaching methods (Kartal, 2023). However, *ChatGPT*'s efficiency in improving the well-being of the teachers and enabling knowledge sharing relies on the integration process, teachers' training sessions, and the availability of supportive frameworks in academic institutions.

Empirical evidence and literature gaps

In the context of adopting new technologies, the Technology Acceptance Model (TAM) framework is very relevant for analysis and prediction in educational settings. For instance, it can be leveraged in the context of leading-edge tools like *ChatGPT*. TAM can help evaluate the perceived usefulness (PU) and the perceived ease of technology use (PEOU) within educational technologies to help faculties incorporate these tools in their teaching systematically (Scherer & Teo, 2019). It is pertinent to indicate that factors determining technology acceptance are critical in professional development to enable educators to use technology in their teaching practices. Many past studies have reported that TAM is helpful and relevant for understanding the adoption of e-learning approaches, technologies, and tools in educational settings (Al-Adwan *et al.*, 2023; Al-Qaysi *et al.*, 2020). In these significant research works, TAM has been demonstrated to offer a more reliable means through which PU and PEOU of *edu-tech* can be quantified, thus enhancing understanding of users' perceptions and intentions regarding the use of technology. Based on this evidence, it can be concluded that TAM has enabled researchers to determine essential factors that influence the acceptance and adoption of technology by the various stakeholders in the educational sector (Scherer & Teo, 2019).

Past literature lacks a vivid definition of well-being, which is the scope of our study. However, a clear consensus exists while associating well-being in the work environment regarding its positive impact, mood, cognition, happiness, satisfaction, and purpose. In contrast, a lack of well-being in professional environments can develop adverse conditions like stress, anxiety, and depression (Bakker & Oerlemans 2011; Ryan & Deci, 2001; Xanthopoulou *et al.*, 2012). From a global perspective, well-being is related to employee's perceptions and experiences at their workplace (Xanthopoulou *et al.*, 2012). According to a study by Bakker and Oerlemans (2011), an employee's perception of receiving positive utility from their workplace can entail a feeling of happiness after task completion. Consequently, their experience of well-being at work is elevated, and any adverse emotions are reduced.

Van de Voorde *et al.* (2012) identified various elements related to well-being in educational settings. Similarly, Peccei (2004) also adopts this method of defining well-being as life satisfaction and stress indicators, which can adversely impact health. However, both Peccei (2004) and Van de Voorde *et al.* (2012) mention limitations in their proposed frameworks; *i.e.*, the presented proposals do not incorporate all forms of work experience that can impact well-being. However, they provide the basis for further conceptual directions for lines of future research associated with employees' well-being. They specify that some trade-off between positive and negative aspects of the subjects' well-being can be created. Over the last few decades, higher education has transformed in various ways, most of which are due to advanced technology, as discussed by multiple studies, including Adams *et al.* (2024), Ansari *et al.* (2024), Mukul & Büyüközkan (2023), and Rawas (2024). However, Adamson and Sloan (2022) argue that top global universities and institutions are now experiencing unprecedented challenges in reorganization to offer appropriate systems for modern, innovative learning methods. This situation is aggravated by the fact that technology has become integral to transforming conventional modes into modern approaches. Due to the pervasion of modern tools, the Internet, and the ubiquitous use of digital devices together with AI, educational resources and processes have undergone crucial changes (Motlagh *et al.*, 2023). Many schools and other educational facilities have already accepted this technological change and are using innovations. Thus, it can be attributed to the faculty's capacity, inclination, and endeavor to assimilate these new tools, which are vital factors.

Therefore, the growing use of AI in educational institutions and teaching methodologies must be explored comprehensively. In essence, AI is the process of designing intelligent devices that can operate in the same manner that the human brain does (Du-Harpur *et al.*, 2020). In the education setting, AI appears in different formats, such as a tutoring system, learning management system, and intelligent evaluation, *etc.* (Ansari *et al.*, 2024). By understanding generative AI as one that can produce text, stories, or art as a human being, we would then have a failsafe definition of generative AI.

OpenAI introduced generative AI to the mainstream media through the popularization of *ChatGPT* in November 2022. Consequently, its release has brought fresh discourses on possible applications and employment in education, as discussed in several research works, including Ansari et al., 2024 and Rawas, 2023). Numerous works have been published by educational institutions and scholars who have addressed the voice from all angles and with regard to both the advantages and disadvantages of *ChatGPT* (Adams *et al.*, 2024; Ansari *et al.*, 2024; Kartal, 2023). These studies indicate some vital factors, such as individualized learning accessibility.

Based on theoretical and practical concerns, it is crucial to reflect on the effects of generative tools like *ChatGPT* on teaching in higher education and decide whether to apply them or not (Baidoo-Anu *et al.*, 2023). Consequently, the call for investigating the faculties that might impact *ChatGPT* from the faculty members' perspectives is even more crucial. This situation does not differ significantly from all the other cases exhibiting the adoption of educational technology where the faculty plays a vital role. It is not a mere process of memorizing knowledge and skills but faculty's beliefs, attitudes, and perceptions about these tools, as reported by Phillipsen *et al.* (2019) and Ansari *et al.* (2024). It becomes even more crucial because *ChatGPT* also has productive implications for harnessing the potential of the digital ecosystems for both research and teaching for faculty members, considering its immersive use in the teaching processes (Rahman & Watanabe, 2023). Thus, to know more about *ChatGPT* adoption, it is imperative to address the faculty's perceptions of the topic. However, the literature clearly lacks many studies regarding faculty use of *ChatGPT*.

AI tools for organizational burden and teacher employment satisfaction

Based on the literature review, it is evident that AI systems reduce teachers' administrative burden and enhance educational utility (Ahmad *et al.*, 2022). For instance, the Intelligent Grading Systems (IGS) and the Intelligent Tutoring Systems (ITS) have been affirmed to have positive impacts on the use of time by students and the provision of further feedback information on students' performance (Barrow

et al., 2008). Additionally, the instituted systems facilitate the task of monitoring students' performance, evaluating their intricate problems, and addressing their learning needs by teachers. Therefore, by minimizing administrative burdens, technology helps teachers to spend more time creating innovative and practical lessons that consequently enhance the learners' learning experience. Furthermore, AI can be utilized to design customized lessons for students, which would increase their interest and activity in learning by using methods that correspond to their individual approach and learning pace. ChatGPT was found to be fruitful for co-creation and thinking in early professional development of teachers (Kartal, 2024).

Based on research findings, it was identified that the use of AI tools can assist in increasing teachers' job satisfaction levels since the workload stress is minimized along with the opportunity to engage more with the students (Chiu *et al.*, 2023). It shifts in such a way that attending teachers can improve their interactions with students, making the learning environment more constructive and encouraging. Nevertheless, some studies reveal cases of anxiety and increased workload when AI tools are utilized if such instruments are not accompanied by proper information support and professional training. It signifies the need for teacher training and professional development that should incorporate education on how to teach using the available AI tools. Moreover, the solutions to these challenges can eliminate burnout and increase the efficacy of teachers, which improves the rate of teacher retention. Another factor that educational institutions should incorporate is offering in-service training and material support to facilitate teachers' embrace and optimization of the use of the technologies so as not to have adverse effects on teachers' job satisfaction and turnover.

Method

Research design

This study employed a qualitative case study methodology to explore the experiences of online English language teachers using *ChatGPT* in their teaching practices and its influence on their professional well-being. The case study methodology is instrumental in educational research for evaluating contemporary phenomena in-depth and within their real-life context (Yin, 2009). This approach enabled us to capture the complexities of *ChatGPT* affecting various dimensions of teachers' professional lives—*e.g.*, workload management and stress levels—by allowing for a rich narrative exploration of the participants' experiences (Creswell & Poth, 2016).

Participants

Six online English language teachers were selected based on their practical experience with AI tools in the classroom. We incorporated various factors such as availability, eagerness to participate, and expertise in teaching advanced courses like essay writing and argumentative essay writing. These advanced courses require a higher level of grammatical proficiency and an in-depth understanding of discourse structure. Each selected teacher had a minimum of two years of teaching experience. Table 1 presents the demographic information of the study participants.

Table 1. Demographic Information of Participants

Participants	Age (Years)	Gender	Teaching Experience (in Years)	Qualification	Experience in using *ChatGPT* (in Months)	Courses Taught
T1	24	Female	2.5	BA	21	Argumentative Essay Writing, Advanced Grammar
T2	24	Male	2.5	BA	6	Essay Writing, Creative Writing

T3	36	Female	15	BA	3	Advanced Academic Writing, Professional English
T4	26	Male	4	MA	18	Research Writing, Advanced Discourse Analysis
T5	26	Male	2	BA	16	Essay Writing, Creative Composition
T6	33	Female	7	BA	18	Critical Writing, Essay Writing, Advanced Rhetoric

In this study, we used semi-structured questions-based interviews as our research instrument to collect the required data for this study. This method allowed us to collect rich, qualitative data related to EFL teachers' use of *ChatGPT* and their perspectives on its impact on their well-being. To construct pertinent interview questions, we explore several pertinent research works, including Nazari *et al.* (2021) and Dale and Viethen (2021). By undertaking an in-depth review of these studies, we focused on the topics and themes that aligned with our research objectives. This thorough literature review helped us develop our interview protocol.

Our interview guide included specific questions, which have been elaborated as follows:

i. What do you think about *ChatGPT's* role in managing your workload and stress levels?
ii. Can you provide a particular example?"
iii. What kind of improvements or changes do you think should be made for *ChatGPT* to be more effective in enhancing well-being in language teacher education?"

This interview guide allowed us to investigate both the practical applications and theoretical implications of *ChatGPT* in the context of EFL teaching.

Data analysis

We leveraged a thematic case study approach to analyze the qualitative data, following the guidelines given by Braun and Clarke (2006). The primary objective of this thematic analysis was to uncover patterns and connections among the themes derived from the qualitative data, addressing our research questions. The study was conducted in five distinct steps. First, we repeatedly studied the interview transcripts to thoroughly familiarize ourselves with the content. In the second step, we developed preliminary codes by grouping pertinent words and phrases to align with our research criteria. After a detailed evaluation of these codes, we categorized them accordingly. During this step, we also compared the results to specify any relationships or patterns. In the final step, we established a set of categories using these grouped codes.

Ethical Considerations

Within the scope of this research, all activities were conducted in accordance with the Scientific Research and Publication Ethics procedures of Higher Education Institutions. The study was approved

by the Arkansas Tech University Institutional Review Board. Ethics Committee (Decision No, 2024-07-01 E)

Findings

The study findings are provided in line with the research questions: Table 2 presents the themes, sub-themes, codes, and sample questions.

Table 2. Summary of Thematic Analysis Findings

Theme	Sub-theme	Code	Sample Quotations
Using *ChatGPT* in Education	Lesson Planning and Material Development	Lesson planning with *ChatGPT*	For me, creating lesson plans by using *ChatGPT* is a very functional process. –T4
		Creating materials with *ChatGPT*	Creating lesson materials has become easier with *ChatGPT*. –T6
	Brainstorming and Writing Assistance	Brainstorming with *ChatGPT*	I get support from *ChatGPT* while brainstorming. –T2
		Writing support by *ChatGPT*	I have found *ChatGPT* to be much more effective in assisting with the writing lessons. –T5
	Student Interaction and Feedback	Student interaction with *ChatGPT*	*ChatGPT* is helpful for me in terms of interacting with my students. –T1
		Providing feedback with *ChatGPT*	I am getting help from *ChatGPT*, and I recognize I can be much more effective by using it. –T5
Occupational Well-being and Motivation	Workload Reduction and Time Management	Workload Reduction	*ChatGPT* significantly reduces my workload. –T1
		Time Management	*ChatGPT* helps me with time management. –T5
	Stress Management	Stress Reduction	I asked *ChatGPT* to write a list of things I had to do on a very stressful and busy day and put them in chronological order, which helped to reduce my stress. –T5
	Occupational Motivation and Job Satisfaction	Occupational Motivation Increase	I believe that *ChatGPT* has increased my occupational motivation. –T4
		Job Satisfaction	*ChatGPT* has had a positive impact on my occupational motivation and my ideas. –T5
Challenges and Concerns of *ChatGPT* Use	Accuracy of Knowledge and Old Versions Challenges	Accuracy of Knowledge and Older Versions	Using older versions of *ChatGPT* poses specific challenges. –T2
	Student's Creativity and the Concern of Laziness	Reduced Creativity of Student	If students overuse *ChatGPT*, it may result in a decline in their creativity. - T5
		Risk of Laziness	I believe that one of the drawbacks of using *ChatGPT*, especially for language teachers, is that it leads them to be lazy. –T4

Thematic data analysis of the interviewed English teachers indicated that those who incorporate *ChatGPT* into their professional experience significant improvements in their occupational health. Regarding functionality, teachers underscored *ChatGPT*'s ability to assist in creating lesson plans, making their work process less tiring. For instance, Teacher 1 said, "*I incorporate ChatGPT to*

streamline and improve the process of developing lesson plans." and Teacher 4 added, "*Creating lesson plans with the help of ChatGPT is highly practical for me*." However, some elements of these plans are occasionally ineffective, as noted by Teacher 5: "*Although ChatGPT is not particularly effective for me, I occasionally use it to assist in creating lesson plans*." Teacher 6 also shared a similar experience, stating that while *ChatGPT* is a helpful tool for drafting ideas, it sometimes falls short in addressing the specific needs of their lesson plans.

Among the vital uses of *ChatGPT* discussed in this study, one of the most critical applications of this tool is in enhancing brainstorming and writing abilities. Several teachers use *ChatGPT* during brainstorming sessions to ensure a continuous flow of ideas and to fine-tune orderly methods for presenting these ideas to students, particularly in their writing projects. More specifically, Teacher 2 contemplated, "*While brainstorming, I get help from ChatGPT*," Teacher 5 noted, *"I've found ChatGPT to be much more effective for writing tasks*," and Teacher 6 mentioned, "*ChatGPT is an important tool in writing classes*."

Furthermore, using *ChatGPT* significantly enhances students' engagement and feedback procedures. According to the teachers' statements, they could conveniently improve their interaction with students and receive adequate assistance in providing feedback, thanks to *ChatGPT*. For instance, Teacher 1 commented, "*ChatGPT helps me in interacting with students*," and Teacher 4 said, "*I think ChatGPT has a positive effect on communication with students*." Similarly, Teacher 5 added, "*I believe that ChatGPT can enhance the development of communicative skills more effectively*" Overall, the use of *ChatGPT* has been widely recognized by teachers as a valuable tool for enhancing their teaching and improving the overall feedback process.

The results regarding the respondents' opinions on *ChatGPT*'s efficacy in the professional thriving of English teachers were positive. They reported an overall improvement in managing their workload, minimizing pressure, increasing motivation, and enhancing job satisfaction. The teachers underscored several essential advantages, including a reduction in the work quality expected from them and more efficient use of time. For instance, Teacher 1 stated, "*It has definitely reduced my workload, allowing me to spend more time on my hobbies and leisure activities*." and Teacher 3 mentioned, "*ChatGPT enhances time management by automatically translating long articles, which reduces my workload and allows me to spend more quality time on other tasks*." Consequently, the workload reduction leads to reduced stress levels, as noted by Teacher 4: "*The less time I spend preparing my materials, the less pressure and stress I have*."

With regard to stress regulation, teachers reported a significant reduction in stress levels due to the integration of *ChatGPT*, which, in turn, has contributed to an overall improvement in their well-being. For example, Teacher 1 said, "*I can now confidently state that the use of ChatGPT has alleviated my stress.*" Teacher 4 stated, "*Preparing lesson plans used to be highly stressful for me; however, it is now a concern of the past that I no longer need to worry about*." Finally, Teacher 5 elaborated, "*The day was so stressful and busy, so I wrote down what needed to be done and asked ChatGPT for assistance, which helped lessen my stress*." An analysis of the data clearly demonstrates that *ChatGPT* significantly alleviates teachers' stress levels.

Besides, the interviewed teachers reported *ChatGPT*'s positive impact on their motivation and job satisfaction levels. For instance, Teacher 3 indicated, "*I believe that ChatGPT has boosted my professional motivation*," while Teacher 4 stated, "*Thus, the boost in my professional motivation contributes to increased job satisfaction*." Teacher 5 reported, "*Using ChatGPT was a positive experience as it positively influenced my professional motivation and well-being.*" These findings indicate a significant improvement in overall job satisfaction.

However, some concerns and challenges were also reported by the respondents. Teacher 2 discussed general issues arising from information flow provided by older versions of *ChatGPT*, stating, "*The use*

of older versions of ChatGPT presents several challenges, particularly in comparison to more advanced iterations." Similarly, there were also concerns about the impact on students' creativity and potential lethargy. Teacher 5 mentioned, "*Students can over-rely on the tool, and that might reduce their creativity*," and Teacher 4 observed, "*One of the drawbacks of using ChatGPT, especially for language teachers, is the laziness factor*." While *ChatGPT* offers substantial benefits in reducing workload, improving communication, and boosting motivation and job satisfaction for English teachers, it is essential to address these concerns regarding its potential impact on students' creativity and over-reliance on the tool.

Discussion

Prior analysis of AI-driven systems like *ChatGPT* unravels how these shifts effectively diminish the amount of paperwork in the teachers' jobs and increase the academic value (Du-Harpur *et al.*, 2020). Computerized grading mechanisms and other personal learning resources have helped in time management while at the same time giving other indications of performance. Such systems allow teachers to guide the students' progress, determine the problematic topics, and make essential adjustments to the learning process by enriching it. As a result, AI frees up educators' time to spend more time designing rich and innovative lesson plans (Liu *et al.*, 2022).

Our findings suggest that using AI solutions in education increases job satisfaction as it releases burden stress, permitting teachers to focus on students' interactions. Overall, these modified strategies improve the cultivation of the requisite teaching-learning environment that is appropriate for students. However, in the absence of proper support and training, it becomes frustrating to the trainers and distends their workload more than necessary, emphasizing the importance of good professional development programs. Proper AI-based implementation in teaching practices merged with teachers' constant training can save from the above-mentioned adverse outcomes, ensuring adequate working conditions for educators. These perspectives complement those made by the JD-R model, which states that technological support informs the execution of a lower number of tasks requiring more time. Consequently, it helps solve the problem of stress and burnout (Bakker & Oerlemans, 2011).

State-of-the-art studies elaborate on how EFL teachers utilize *ChatGPT* in the context of work-related job satisfaction and general perceptions of the technology's benefits to occupational well-being (Chiu *et al.*, 2023). This study distilled the following themes through a process of immersed and code-like data analysis from semi-structured interviews about teachers' professional domains influenced by *ChatGPT*. The participants mentioned that teachers were satisfied with *ChatGPT* in lesson planning and instructional material development. Moreover, the time and effort required to complete these tasks have been cut noticeably, and the pressure is off (Chiu *et al.*, 2023). According to the literature, AI's use in education can assist with most education-related administrative and planning functions (Adiguzel *et al.*, 2023; Al-Qaysi, 2020; Tejas *et al.*, 2023).

Another prominent theme was using *ChatGPT* to produce ideas and writing endeavors. According to the teachers, integrating *ChatGPT* into brainstorming and writing assistance promoted creativity and a better structure of the students' writing assignments. Furthermore, the participants also signified that *ChatGPT* increases interaction with students and helps give relevant and positive feedback (Kartal, 2023). This outcome corresponds to studies that give flesh to the promise of intelligent learning environments where the learner interacts with an AI system that adapts to the learner's needs and provides instant feedback to support better learning outcomes (Kartal, 2023). Teachers said that *ChatGPT* enhanced the way of interacting with students and made the feedback-giving process more effective and meaningful. These findings are supported by Kartal (2023).

Among the findings of the study, it was evident that the teachers comprehend *ChatGPT* as a tool that enables them to manage their workload and leads them to have less stress. The respondents illustrated that with the help of *ChatGPT*, they could spend more time on actual teaching instead of lesson planning

and complete many administrative tasks with a lesser stress level. This finding has added support to the JD-R model, where job demands should be reduced through technology support by lowering stress and burnout (Bakker & Oerlemans, 2011). Cohort teachers noted a reduction in their burden of work and enhanced use of time/theories casually associated with reduced stress and increased teachers' professional use of the interventions (Naghieh *et al.*, 2015).

Like motivation, positive transformations in job and professional satisfaction were observed among the respondents after using *ChatGPT*. They underscored that the established proficiency and reinforcement by *ChatGPT* increased their desire and happiness in their occupations. These findings concord with the TAM, which outlines that the perceived usefulness and ease of use of a specific innovation has a remarkable impact on the users (Al-Qaysi *et al.*, 2020). The participants also stated that using *ChatGPT* provided them with a vision that motivated them to perform their work responsibilities efficiently. As a result, their job satisfaction substantially increased in the teaching profession, which is parallel to the findings of Klassen and Chiu (2010).

Although there are significant advantages to employing the ChatGPT, several problems and issues were highlighted. Some of the concerns by teachers included inaccurate information in prior versions of *ChatGPT*, potentially harming students' creative thinking and professional ethics. Such concerns can be associated with other general issues regarding the use of AI in education. For instance, these issues include the problem of preparing students for the new technological era and minimizing the *'over-use'* of technology. Mitigating these threats is vital in enhancing the efficacy of AI applications, such as the use of *ChatGPT* in learning environments (Adiguzel *et al.*, 2023). Also, excessive use of AI can have several limitations. For instance, a frequently raised issue posed by teachers is the problem associated with acquiring only current and accurate information from the prior version of the tool. This implies that the tools must be developed and improved many times according to the most recent educational requirements, and the information that is searched for has to be precise. Similarly, the level of creativity among the students is also jeopardized while using AI tools like *ChatGPT*. Consequently, students excessively using *ChatGPT* to complete their assignments and perform the tasks may lose their will to work on acquiring their problem-solving and critical thinking abilities (Kartal, 2024). While such over-dependence on AI solutions may have benefits for teachers, it also has detrimental effects that can harm the learning process and students' attitudes toward the material as well. Students become much less willing to comprehensively engage with the content and much more eager to find answers from AI resources instead.

Conclusion

This study offers valuable insights into the possible advantages and limitations of using AI tools in educational settings. The described objectives of the study can help develop support systems that can improve teachers' professional well-being by taking into account the effects of *ChatGPT* in their practice. The present work also contributes to the general field of educational technology and provides policy recommendations and solutions to policymakers, academic managers, and technology providers.

Based on our findings, educators' reactions to *ChatGPT* integration among English language teachers have been perceived positively, primarily because this tool can save lesson preparation time for teachers. Moreover, it improves their health conditions and performance in the class. *ChatGPT* helps in diverse teaching activities such as lesson planning, materials creation, ideas generation, and writing process support. Therefore, the proposed comprehensive support system helps teachers reduce the amount of work on their hands, which in turn improves efficiency. In addition, many teachers have also reported that they have endured less stress compared to before in performing their duties and have experienced an elevated level of satisfaction due to the operational efficiency offered by *ChatGPT*. Likewise, using AI tools provides students with more opportunities to engage in communication activities, thereby encouraging innovation and promoting a favorable learning ecosystem in the class.

Furthermore, teachers have also noted that students may overly rely on AI tools, leading to little innovation or individual input in the performed work. This situation can lead to poor-quality student outputs and a slow learning process. It is on these considerations that one must ensure that the utilization of ChatGPT is well controlled in the proper manner, ensuring that it will be of most utility rather than being merely a hindrance to learners. However, these risks can be managed through appropriate supervision and by enhancing structural guidelines for using AI tools in education to improve students' future education without negative impacts.

Several studies have discussed the benefits and risks associated with AI in learning processes, but there are still some gaps that exist pertaining to other effects of AI applications, including *ChatGPT*, on teachers' absenteeism. Therefore, further quantitative studies should be performed to evaluate the conditions in which these tools enhance or jeopardize the teachers' quality of life and to specify optimal practices for using these tools. Additionally, foresight is required to fine-tune AI tools in education and their impacts on the general education system. Another limitation of current studies is their focus on students' perceptions, often overlooking the perspectives of teachers. Understanding teachers' perceptions about implementing AI in their institutions is also vital for understanding this phenomenon. Therefore, future studies should include primary and high school students, parents, and school administrators to collect general opinions on AI effects in schools. Understanding how it contributes to the student's engagement in the learning process, as well as the level of their satisfaction, will be valuable in determining the effective way of using AI. Moreover, future research should seek to expand the knowledge of how AI technologies are utilized effectively in education depending on various cultural contexts globally.

To investigate the impact of *ChatGPT* on teachers, more specifically regarding their workplace stress and burnout, further research should be carried out. Analyzing with the help of quantitative research methods can offer in-depth insights into the changes in the aspects of teaching and administrative functions impacted by AI tools. Furthermore, the general use of *ChatGPT* in educational contexts, as well as other potential problems, should be presented in more detail for further elaboration of preventive measures against the possible issues mentioned. Involving students in this research is also very critical since their insights can offer a broader view of the tool's impact on the education process, enhancing the overall understanding from both teachers' and students' perspectives.

Considering *ChatGPT* and its widespread benefits for increasing the efficacy of English language teachers and avoiding their burnout, the pros outweigh the cons. Moreover, the risks must be described while using these tools. To promote the positive state of teachers, AI should be further refined and incorporated correctly into the learning process. However, it is always imperative to remain cautious of potential risks and be prepared for the associated preventive measures. This all-inclusive approach can reveal AI's full potential to support and enrich the educational process with the help of leading-edge generative tools like *ChatGPT*.

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