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UNDERSTANDING PARENT SATISFACTION: KEY INFLUENCING FACTORS FOR ADVENTIST SCHOOLS IN ROMANIA

Lehaci Aurel Onisim¹, Hilt Jorge A.²

Abstract

For many researchers, satisfaction is a crucial topic of study, particularly the field of education, where it receives significant attention. There are studies that have explored the satisfaction of parents and students regarding their experiences with the school. However, studies on parental satisfaction are limited, especially in Romanian context. The purpose of this study was to determine the factors that determine parental satisfaction. This study aims to explain whether perceived value, corporate image, service quality, convenience and communication are predictors of parent satisfaction. The research has a quantitative, non-experimental, cross-sectional, predictive approach. The population consisted of parents who enrolled their students in Seventh day-Adventist Schools in Romania, while the sample is made up of 297 parents participated in the study. The statistical technique of multiple linear regression was applied to test the hypothesis. It was found that perceived value is the most influential factor affecting parents' satisfaction and accounted for 56.8% of its variance, followed by service quality at 31.3%, and convenience at 8%. Further research may use the findings of this study and investigate additional factors which influence parent satisfaction.

Keywords

Parent satisfaction, service quality, convenience, communication, perceived value, Adventist schools, Romania, educational quality assessment; quantitative study

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INTRODUCTION

The quality of education has become an important concern in society, evolving into a service-oriented industry where students and parents play an important role in shaping its outcomes (Hao et al., 2025).

Satisfaction is a key factor that significantly influences both student and parent engagement, as well as overall learning outcomes (Savira et al., 2024). Therefore, assessing their satisfaction with key services - such as the curriculum, infrastructure, support services, student care, and teaching quality provides valuable feedback.

Parents are important stakeholders in education, and their expectations of the school – along with their experiences – have major impact in shaping their satisfaction levels (Noworól, 2023). Parental satisfaction is crucial not only for students' academic achievement but also for their overall well-being (Tuhu Edi Arihta & Giovani, 2024).

Parents invest significant time, energy, and financial resources to support their children's growth, well-being, and overall development. Given this commitment, it has been argued that their expectations should be valued as highly as those of customers, with deliberate efforts made to meet them effectively. Addressing these expectations can lead to increased parental satisfaction (Desianti et al., 2021).

Parental satisfaction acts as a barometer of the quality of education offered by schools (Meier & Lemmer, 2019). Parental satisfaction with the educational experience is associated with increased engagement in their children's learning and greater support for school initiatives (Pomerantz et al., 2007).

Based on this, it is evident that satisfaction plays a crucial role in success and sustainability of educational institutions. In the context of Adventist schools in Romania, understanding the factors that influence parent satisfaction is essential for

improving the quality of education and fostering stronger school-community relationships.

To the best of our knowledge, no studies have specifically examined the determinants of parent satisfaction within Adventist schools in Romania. As known, these schools operate within a unique educational and cultural framework, emphasizing faith-based learning, moral development of character, and academic excellence. Therefore, investigating how factors such as perceived value, corporate image, convenience, and communication contribute to parent satisfaction can provide valuable insights for educators and policymakers.

By examining the specific factors that shape parental satisfaction—such as communication quality, perceived academic standards, and alignment with faith-based values—this study seeks to provide school leaders with practical, research-grounded guidance. The findings aim to inform targeted strategies that address parental expectations more effectively, thereby fostering deeper involvement in school life and reinforcing trust in institutional practices. Such alignment has the potential to enhance both student outcomes and institutional sustainability within the Adventist school system in Romania.

REVIEW OF LITERATURE

Satisfaction is a state achieved when a person perceives that their experiences, performance, or expectations have been met or surpassed (Hansemark & Albinsson, 2004). Satisfaction can be described as a state which is realized when a person feels that the performance, experience, or his expectations have been met or surpassed (Kumar & Kumar, 2020).

Parent satisfaction refers to how parents, as guardians of students, perceive the quality of education their children receive in relation to the level of educational quality they expect during the school education process (Shao et al., 2022). As

shown by Skallerud (2011) parental satisfaction is a key factor in evaluating school effectiveness and has become an important measurement tool of public service performance in basic education.

The relationship between parental satisfaction with their children's school and the choice of school appears intuitive. Although parental satisfaction has received some scholarly attention, relatively few studies have explored its contributing factors compared to the substantial body of research on student satisfaction (Hausman & Goldring, 2000).

Parasuraman et al. (1988) identified five important dimensions that shape customers' perceptions of service quality: reliability, tangibles, responsiveness, assurance, and empathy. Further, Fantuzzo et al. (2006) recognized three factors which influence parent satisfaction such as experiences with teachers, experiences within the classroom, and experiences at the school level.

According to Friedman et al. (2006), parents assess their child's school based on various factors, such as safety, budget, teacher performance, administrative leadership, curriculum quality, availability of computer technology, school facilities, transportation services, parent-school communication, parental involvement, classroom learning support, and student academic achievement.

Other research include factors such safety, budget, teacher performance, administrative leadership, curriculum quality, availability of computer technology, school facilities, transportation services, parent-school communication, parental involvement, classroom learning support, and student academic achievement (Mashburn et al., 2008).

Interpersonal dynamics—such as teacher-student, student-peer, and parent-teacher interactions—as well as student engagement in daily school activities, play a critical role in shaping perceptions of educational service quality (Banga &

Jaswal, 2001; Ishimine et al., 2009). Studies further suggest that parental satisfaction is closely linked to perceptions of school quality, with expectations and service delivery serving as key mediating factors (Anwar et al., 2024; Desianti et al., 2021; Gencay & Aşıkçıl, 2012; Huang et al., 2022; Jerrim et al., 2024). Additional institutional elements, including the effectiveness of school communication, academic performance, curriculum relevance, school climate, safety protocols, and logistical services such as transportation, have also been identified as significant contributors to parents' overall satisfaction (Badri et al., 2010; Friedman et al., 2007).

Hoang et al. (2022) conducted a study in Danang, Vietnam to identifying key factors affecting parental satisfaction in pre-school education. The results show that facilities, responsiveness to information, teachers and educational programs ($\beta=.256$, $t = 5.859$, $p < .001$), financial costs ($\beta=.298$, $t = 8.186$, $p < .001$), facilities, equipment, and supplies ($\beta=.376$, $t = 10.103$, $p < .001$) and care and support ($\beta=.052$, $t = 2.078$, $p < .038$) significantly impact parents' satisfaction with the quality of preschool educational services. As evident, the quality of facilities was identified as the most influential factor.

In another quantitative study, Shao et al. (2022) conducted a survey of middle school students' parents to develop a model examining how parental involvement influences parental satisfaction. The study also explored the moderating roles of parental education level and the number of children. The findings indicated a significant positive relationship between parental involvement and satisfaction ($\beta = .647$, $t = 105.376$, $p < .001$). However, parental education level and the number of children negatively moderated the relationship between parental involvement and satisfaction ($\beta = -.018$, $t = -3.995$, $p < .001$; $\beta = -.014$, $t = -2.005$, $p < .05$). Meanwhile, the number of children had a positive effect on parental satisfaction ($\beta = .006$, $t = 8.432$, $p < .001$). These findings suggest that while

the number of children has a minor impact on parental involvement, it plays a more substantial role in shaping parental satisfaction.

METHODOLOGY

Objectives

In alignment with the research problem, the general objective of this study is to evaluate the extent to which perceived value, corporate image, service quality, convenience, and communication significantly influence parental satisfaction. The second objective is to identify and describe the specific factors that shape parental satisfaction, with the aim of providing contextualized insights for educational stakeholders within the Adventist educational system.

Methods

To achieve the research objective, the study employed a quantitative, non-experimental, descriptive, cross-sectional, and correlational design with predictive components.

Data were collected through a structured survey administered to parents with children enrolled in Adventist at the primary, secondary, and high school levels across Romania.

The analysis was conducted using multiple regression to assess the predictive power of five dimensions—*Perceived Value*, *Corporate Image*, *Service Quality*, *Convenience* and *Communication*—on overall parental satisfaction. Mean scores for each dimension were entered as independent variables in the regression model to determine which factors explained the greatest proportion of variance in satisfaction levels.

The analytical approach enabled the identification of the most influential predictors of parental satisfaction within the

sample, including both direct and indirect relationships among the variables.

$$Y = b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + \text{Constant}$$

Y: *Parent Satisfaction* (dependent variable)

X₁: *Perceived Value*

X₂: *Corporate Image*

X₃: *Service Quality*

X₄: *Convenience*

X₅: *Communication*

The corresponding coefficients of regression are represented by b₁, b₂, b₃, b₄ and b₅.

Instrument

The instrument used in this study is adapted from Mon's (2019) work, which reported a Cronbach's Alpha reliability coefficient of .779 for the scale. This instrument was translated and validated by a community of Romanian experts. It was subsequently adapted and adjusted to fit the cultural and local context, ensuring content validity.

Participants

The study's target population comprised parents who enrolled their children in Adventist Schools across Romania. Using convenience and random sampling methods, an electronic questionnaire was distributed to 297 parents, with 245 completed responses accepted for analysis, yielding a response rate of 85.86%.

Among the respondents, 56 (22%) were male, and 199 (78%) were female, confirming that women formed the majority of participants. Regarding age distribution, 5% respondents were under 30 years old, 41.9% were aged 31-40, 45.6% were between 41-50 years old, and 7.4% were above 51 years old.

In terms of educational background, 41.2% parents had completed secondary or lower secondary education, 35.1% held a bachelor’s degree, 19.2% had a master’s degree, 1.2% pursued doctoral studies, and 3.3% had completed other forms of education. Regarding professional status, 18.4% respondents were civil servants or state employees, 21.2% worked in companies or NGOs, 16.3% were self-employed or entrepreneurs, 3.7% were dependents, 2.4% were retirees, and 38% reported other professions.

Parent incomes varied, with 25 respondents (10.2%) earning below 2,000 lei, 103 (42%) earning between 2,000 and 3,999 lei, 52 (21.2%) having incomes between 4,000 and 4,999 lei, 52 (21.2%) earning between 5,000 and 9,999 lei, and 13 (5.3%) reporting incomes above 10,000 lei.

Participants were from various regions, like North-East, South-East, South-Muntenia, South-West Oltenia, West, North-West, Center, and Bucharest-Ilfov. The majority of participants were women (78%), with an average age of 45 years, ranging from 24 to 77 years. Regarding the schools where children were enrolled in 15 Seventh day-Adventist Schools in Romania.

Table 1
An overview of participants (n = 245)

Variable	n	%
Gender		
Male	56	22
Female	199	78
Age		
Under 30 years old	12	5
31-40 years old	101	41.9
41-50 years old	110	45.6
Above 51 years old	14	7.4
Education		
Secondary and lower	101	41.2
University studies (Bachelor)	86	35.1
Postgraduate studies (Master)	47	19.2

Doctoral studies	3	1.2
Other	8	3.3
Salary		
Under 2000 lei	25	10.2
2000-3999 lei	103	42
4000-4999 lei	52	21.2
5000-9999	52	21.2
Above 10.000	13	5.3
Current Job		
State employee	45	18.4
Employed in a company/NGO	52	21.2
Person (entrepreneur/self-employed)	40	16.3
Dependent	9	3.7
Pensioner	6	2.4
Other profession	93	38
Region		
North-East	49	20
South-East	76	31
South-Muntenia	36	14.7
South-West Oltenia	46	18.8
West	6	2.4
North-West	7	2.9
Center	7	2.9
Bucharest-Ilfov	18	7.3
Schools Chosen by Parents for Their Children		
Școala Gimnazială „Doctor Luca”, Brăila	22	9
Liceul Teoretic „Mihai Ionescu”, București	8	3.3
Liceul Teoretic Eviss, Iași	29	11.8
Școala Gimnazială „Elias”, Podiș	11	4.5
Liceul Teoretic „Dr. Lind”, Câmpenița	4	1.6
Școala Gimnazială „Excelsis”, Ploiești	2	0.8
Liceul Teologic Adventist „Maranatha”, Cluj	4	1.6
Liceul Teologic Adventist, Craiova	49	20
Școala Primară „Elisei”, Piatra Neamț	13	5.3
Liceul Teologic „Ștefan Demetrescu”, București	42	17.1
Școala Gimnazială Adventistă, Matca	17	6.9
Școala Gimnazială „Wilhem Moldovan”, Constanța	29	11.8
Școala Primară Adventistă, Târgoviște	10	4.1
Liceul Internațional Integritas	2	0.8
Școala Primară Speranța, Macea	1	0.4

RESULTS

Table 2 presents the descriptive statistics of the variables analyzed, including the mean (M), standard deviation (SD), and Cronbach’s alpha reliability coefficient for each scale. Overall, the means are high, ranging from 4.52 to 4.68, indicating a favorable perception from participants across all evaluated dimensions.

The Cronbach’s alpha values reflect adequate internal consistency for most of the scales: Communication (.909), Corporate Image (.855), Service Quality (.844), and Perceived Value (.839) demonstrate excellent levels of reliability. However, the Convenience dimension shows a lower value (.630), suggesting moderate reliability.

Table 2
Descriptive statistics of the variables

Variable	M	SD	Cronbach's alpha
Perceived Value	4.64	0.50	.839
Corporate Image	4.52	0.59	.855
Service Quality	4.53	0.57	.844
Convenience	4.68	0.41	.630
Communication	4.68	0.59	.909

Influencing factors

The independent variables: *Perceived Value*, *Corporate Image*, *Service Quality*, *Convenience*, and *Communication*—and the dependent variables—*Parent Satisfaction* were measured using the instrument developed by Mon (2019). This instrument comprises 25 items and demonstrates strong reliability with a Cronbach’s alpha of .855, indicating a high level of reliability. The factors influencing Parent Satisfaction—Perceived Value, Service Quality, Corporate Image, and Communication—were assessed using 20 items in the instrument

developed by Mon (2019). These items were rated on a five-point Likert scale, ranging from strongly disagree (1) to strongly agree (5). The reliability metrics for the individual constructs were as follows: Perceived Value (4 items) had a Cronbach's alpha of .839, Corporate Image achieved .855, Convenience had a lower reliability with a Cronbach's alpha of .630, and Communication showed the highest reliability at .909. Parent Satisfaction was measured by five items on the same five-point Likert scale. The construct demonstrated very high reliability, with a Cronbach's alpha of .931.

The null hypothesis (H0) states that perceived value, corporate image, service quality, convenience, and communication are not significant predictors of parent satisfaction as perceived by participating parents. After removing 52 outliers, multiple linear regression was used to test the null hypothesis. As a first step, we proceeded to corroborate that the regression assumptions were met.

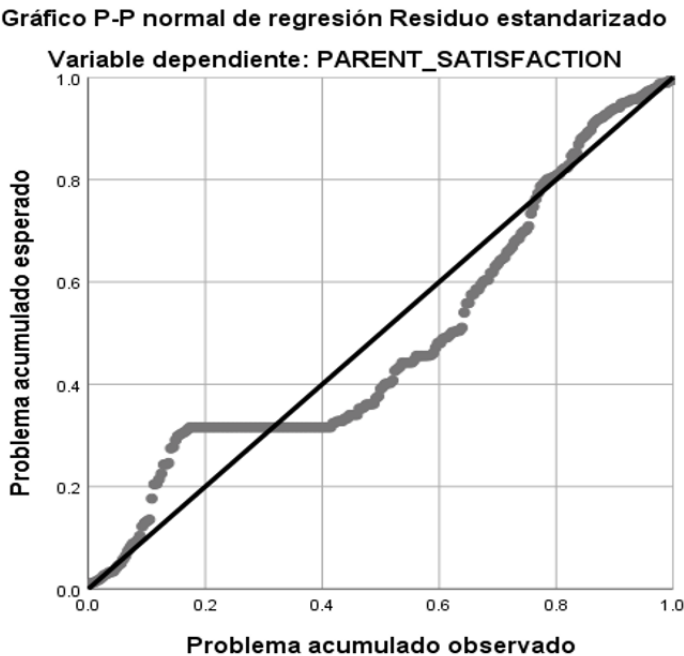
To determine the autocorrection of the residuals, the Durbin Watson statistical test was applied, which yielded a value of 1.914. This very close to 2, suggesting that there is little to no autocorrelation in the residuals. It also indicates that the assumption of independent errors (a key assumption in regression analysis) is likely satisfied. Therefore, the value shows the independence between the residuals, indicating that the assumption of independence of residuals is not violated.

All the assumptions of multiple regression were satisfied in this study. The variance inflation factor (VIF) was used to evaluate the presence of collinearity. When VIF values range between 1 and 4, they indicate that there is no collinearity between the variables. The results indicate the following VIF values: (a) perceived value (VIF = 3.427), (b) corporate image (VIF = 2.779), (c) service quality (VIF = 4.207), and (d) convenience (VIF = 1.986), communication (VIF = 2.530). All

these values are all below 5, suggesting that multicollinearity is not a critical concern in the model proposed.

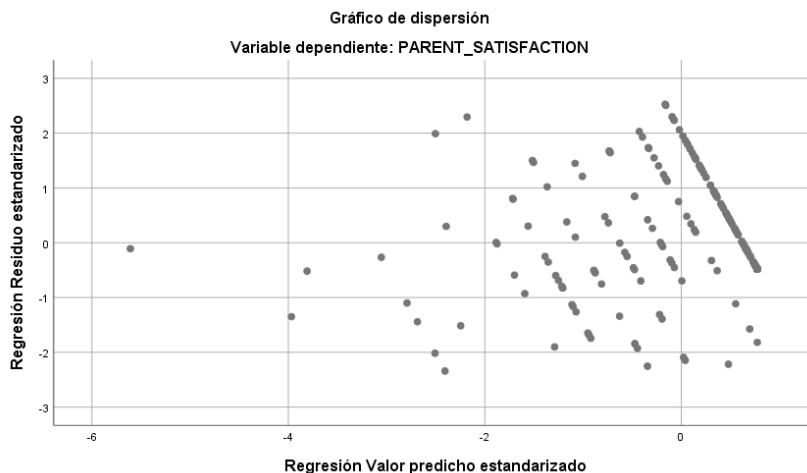
Figure 1 shows the Normal P-P Plot of Regression Standardized Residual, which tested the normality of the residuals. The following figure is also a representation of a linear model, whereby the residuals are normally distributed between the Q - Q plot. The points apparently form a straight line, indicating that the data do not significantly violate the assumption of normality of the residuals.

Figure 1
Standardized residuals plot



The analysis of Figure 2 reveals an absence of any non-random pattern in the residuals, leading to the conclusion that the homoscedasticity assumption remains unviolated.

Figure 2
Scatter plot for homoscedasticity



Pearson correlation analysis reveals a correlation between all five independent variable and parent’s satisfaction (parental satisfaction). Of all these, the variable Service quality ($r = .797, p < .000$) has the strongest correlation with parent satisfaction, followed by and communication ($r = .722, p < .000$), Corporate Image ($r = .718, p < .000$), Convenience ($r = .650, p < .000$).

Table 3
The Pearson correlation between the variables (n = 245)

Variable	Perceived Value	Corporate Image	Service Quality	Convenience
Perceived Value	-			
Corporate Image	.718**	-		
Service Quality	.797**	.774**	-	
Convenience	.650**	.614**	.652**	-
Communication	.722**	.583**	.739**	.589**

** Correlation is significant at the .001 level (2-tailed).

According to the results in Table 4, the corrected coefficient Adjusted R² is .911, suggesting that a one-unit change in the independent variables accounted for approximately 91.1% of the variation in parental satisfaction. The Durbin-Watson value of 1.914 showed statistical significance, confirming that the regression model met the assumption of independent errors.

Table 4
Summary of the parent satisfaction regression model

Model	R	R square	R square adjusted	Standard error of the estimate	Durbin-Watson
1	.956 ^a	.913	.911	.14931	1.914

a. Predictors: (Constant), Communication, Corporate_Image, Convenience, Perceived_Value, Service_Quality; b. Dependent variable: Parent_Satisfaction

The results in Table 5 show that the F-test had a significant value ($p < .05$), suggesting that the linear regression model was appropriate for the entire dataset. Therefore, a significant regression model was developed.

Table 5
ANOVA

	Sum of squares	gl	Mean square	F	p-value
Regression	55.922	5	11.184	501.712	.000 ^b
Residue	5.328	239	.022		
Total	61.250	244			

Multiple linear regression model, by the enter method, excluded the variable corporate image and communication, and found that perceived value ($\beta_{st} = .568, p = .000$), service quality ($\beta_{st} = .313, p = .000$) and convenience ($\beta_{st} = .080, p = .000$) are significant predictors of parent satisfaction with a variance explained of 91.3 %. The regression equation estimated with

unstandardized coefficients was as follows: Parent Satisfaction = .466 + .519 (Perceived Value) + .249 (Service Quality) + .092 (Convenience).

In table 5, p-values below .05 are regarded as statistically significant.

Table 6

Multiple linear regression analysis statistics

Variable	Unstandardized coefficients		Standard-ized coefficients	t	p-value	Collinearity Statistics	
	B	Standard Error	Beta			Tolerance	VIF
(Constant)	.466	.105		4.430	.000		
Perceived_Value	.519	.032	.568	16.087	.000	.292	3.427
Corporate_Image	.025	.026	.031	.985	.326	.360	2.779
Service_Quality	.249	.031	.313	8.009	.000	.238	4.207
Convenience	.092	.031	.080	2.993	.003	.504	1.986
Communication	.036	.025	.044	1.460	.145	.395	2.530

Therefore, the null hypothesis is rejected and the research hypothesis is accepted when it is found that the variables perceived value, service quality and convenience explain 91.3% of the variance of parent satisfaction.

DISCUSSIONS

This study contributes with empirical evidence to the limited body of literature on parental satisfaction within faith-based education in Eastern Europe, with a particular emphasis on Adventist education in Romania. While the literature has long acknowledged the multifaceted nature of parental satisfaction (Friedman et al., 2006; Mashburn et al., 2008), recent studies have expanded this understanding to include value perception, service quality, and practical considerations such as convenience (Anwar et al., 2024; Desianti et al., 2021; Gencay & Aşıkil, 2012). Consistent with these findings, this research identifies *Perceived Value*, *Service Quality*, and *Convenience*

as the most salient predictors of parental satisfaction, with *Perceived Value* exerting the strongest influence. These findings reinforce existing research that highlights the role of perceived value and service quality in shaping parental satisfaction across diverse educational contexts.

Further, Hoang et al. (2022) and Mon (2019) emphasize the growing importance of aligning institutional services with parent expectations, particularly in private and faith-based schools. Similarly, Nguyen and Nguyen (2021) argue that schools must demonstrate not only academic excellence but also value-added services and ethical alignment to maintain stakeholder satisfaction. In the Adventist context, this implies a dual emphasis: maintaining educational rigor while promoting the spiritual and moral dimensions that differentiate these institutions from secular alternatives (Knight, 2016).

By demonstrating that perceived value outweighs service quality and convenience in predicting parental satisfaction, this study deepens the theoretical understanding of how faith-based values interact with educational service attributes. It suggests that parental satisfaction frameworks must integrate spiritual–ethical alignment alongside traditional service quality dimensions, especially in contexts where religious identity is central.

The results have significant implications for Adventist schools operating in Romania. Firstly, the strong effect of *Perceived Value* underscores the need for these institutions to clearly communicate and consistently deliver an educational value aligned with parental expectations and Adventist principles. This includes not only academic achievement but also holistic development, grounded in the core principles of Adventist philosophy—character formation, spiritual growth, and community service (Anderson, 2003; Burton & Nwosu, 2003). Schools that effectively communicate these distinctives

to parents are more likely to cultivate trust, satisfaction, and long-term commitment.

Secondly, the influence of *Service Quality* and *Convenience* highlights the importance of operational excellence and responsiveness. As previous studies have shown, satisfaction is enhanced when parents perceive schools as accessible, communicative, and well-managed (Huang et al., 2022; Joseph & Joseph, 1997). Adventist schools in Romania should therefore invest in administrative efficiency, digital communication tools, and parent-centered services such as flexible scheduling, informative reporting systems, and accessible leadership.

Moreover, the high level of satisfaction reported in this study suggests that Adventist schools are meeting many parental expectations. However, maintaining this positive perception will require continuous monitoring, reflection, and adaptation to emerging societal and educational trends. This includes engaging in meaningful dialogue with parents, incorporating their feedback into decision-making processes, and building a culture of shared ownership and collaboration.

It is important to note that the majority of respondents in this study were mothers, which may limit the generalizability of the findings to the broader parent population. Future research should aim to capture a more balanced gender representation to better understand the full spectrum of parental satisfaction. Additionally, the exclusive use of online data collection, while practical, may have introduced limitations in comprehension and response accuracy due to the lack of face-to-face interaction.

Further studies could explore the relationship between parental satisfaction and student outcomes within Adventist schools, offering a more holistic view of institutional effectiveness. Longitudinal designs could also be employed to assess changes in satisfaction over time, particularly in response to strategic interventions.

CONCLUSIONS

This study contributes to the expanding literature on parental satisfaction by providing context-specific evidence from the Adventist educational system in Romania—a context that has been under-represented in previous research.

The findings highlight the central role of perceived value, service, service quality, and convenience in shaping parental satisfaction, underscoring their importance for fostering institutional sustainability and trust.

For Adventist schools, these insights based on research point to the need for a strategic alignment between educational delivery and the institution's dual mission: upholding faith-based principles while responding to evolving expectations in contemporary educational environments.

Future initiatives should incorporate these findings into both strategic planning and stakeholder engagement efforts to strengthen long-term partnerships between parents and schools that uphold a spiritual mission while meeting modern educational standards.

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LEADERS' MINDSET WITHIN SMALL FAMILY-OWNED BUSINESSES IN A SMALL ISLAND STATE: A GROUNDED THEORY APPROACH

Mary Rose Mifsud¹, Rose Falzon², Alex Rizzo³

Abstract

The aim of this grounded theory study is to identify the obstacles that leaders face due to differing mindsets among leaders within small family-owned businesses. It also examines the impact of these mindsets on small businesses in a small island state. The outcome of this study will assist both types of leaders who purposively were selected for this study; the founders who value stability and adhere to deep rooted organizational practices and the current /modern leaders who embrace innovation and promote forward thinking initiatives. Grounded theory was adopted for this qualitative study. The researcher conducted twelve open-ended interviews with leaders of small businesses in the small island state of Malta. MAXQDA (VERBI software) was used for data analysis. A four-stage coding process, ongoing comparison, reflexivity, memos, and Corbin and Strauss's conditional matrix were utilized to determine essential categories, contextual conditions, actions, responses and results. Results indicate that for small family enterprises to succeed in a fast-changing market, conventional and creative leaders need to work together, blending fresh concepts with adherence to core values. Their collaboration is vital for stability, development, and enduring

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achievement. The research highlights the significance of leadership in influencing organizational results and recommends embracing a hybrid leadership approach. An early conceptual model was developed to support both leaders in growing their business, blending traditional values with modern innovation to offer recognition and stability while promoting progress.

Keywords

Leadership, innovation, leaders' mindset, small business, small island state

INTRODUCTION

This paper focuses specifically on the obstacles that leaders face due to differing mindsets among leaders within small family-owned businesses which play a vital role in Malta's economic landscape by contributing significantly to employment and local entrepreneurship. Maltese legislation classifies a small business as an enterprise that employs less than 49 employees and has an annual turnover or balance sheet total not exceeding €10 million (Malta Enterprise, 2023). Within this small business category, the family firm, which constitutes businesses owned and managed by family members, are particularly important due to their strong personal investment, long-term vision, and commitment to sustainability (Malta Enterprise, 2023).

Despite their economic significance, small family firms face unique challenges because of different mindsets that might risk their business' future. These challenges include decision-making conflicts, limited access to financial resources, and balancing family and business interests (Borg, 2021). Family dynamics in small family firms may lead to certain challenges because of different mindsets that leaders have, and such mindsets can lead to various aspects to be addressed such as lack of communication, trust, resistance to change and bad leadership. Broadly speaking, leaders' mindset within small companies plays a significant part in the success or failure of the small

businesses. The researcher studied, delved and explained the progress of these businesses, where family dynamics form the basis of leadership implications. Furthermore, the researcher explored different lacunas in the today's evolving world, particularly where leaders' mindset is different and adverse within the small but well-known island state of Malta. The specific challenges were navigating modern mindsets versus traditional mindsets, decision-making in uncertain situations, resistance to change, managing conflicting interests among leaders, and dealing with high expectations.

Hence, for this study, it was crucial for the researcher to delve into a few, from many, different and evolving leadership theories such as transactional leadership, transformational leadership, democratic leadership, autocratic leadership and human centered leadership. Consequently, the researcher also took into consideration concepts and models to analyze how such theories and literature relate to leaders' real-world leadership scenarios, especially where mindset-related challenges are so prevalent. Consequently, the researcher has addressed a research gap relating to a lack of knowledge of how such literature and theories can apply to real world leadership scenarios in a small island state, especially when mindset challenges prevail.

For this study, the grounded theory approach was applied to develop a theoretical explanation and a conceptual framework model of such leaders' mindsets and their leadership styles within small family-owned firms in the small island state of Malta. The study also aims to provide an analysis from an organizational perspective of the interaction and differences between the current modern leaders and their predecessors, the traditional leaders of small family-owned firms.

LITERATURE REVIEW

Small family businesses in a small island state within the European context

Leadership within small firms often results from informal ascendancy structures, where decision-making remains highly centralized within the family sphere. As a result, leadership within small Maltese family firms can influence the business' sustainability and adaptability in a rapidly changing market (Camilleri, 2015). Small family businesses in an island state like Malta play and represent the oldest form of businesses and are dominant, especially when one considers the long history of activities that Malta had compared with other European states (Brincat, 2009).

In Europe about 70 to 80% of companies are family-owned businesses as stated by Brigham et al. (2013), while Smith (2007) argues that small firms are the motors of the economy, and their subsistence and growth are of paramount importance, especially in this competitive modern world era. In this modern economy, small businesses face overwhelming and continuously increasing competition (Farrugia, 2020). To face these competitions innovation is important, but it can only grow if good leadership is in place to drive it.

One of the key determinants of a leader's effectiveness is their leadership style. Broadly speaking, the efficacy of leadership styles within small companies plays a significant role in the success or failure of the small businesses. Understanding their unique challenges and barriers due to difference in mind-sets is essential for both aspiring leaders and those working within a leadership role. By identifying the strengths, weaknesses, and opportunities for the business to grow further, such attributes may be interplayed between the leaders who are traditional leaders and the modern leaders who both have the will to continue further with their small family business.

Leadership characteristics

Leadership is all about “the different characteristics of leaders who are ready to apply their own leadership style. Leaders are the ones that show that their leadership is dominant, ready to introduce innovativeness and leaves good influence within the team” (Bass & Riggio, 2006, p. 112). In fact, Blanchard (2009) argues that the key to successful leadership today is influence, not authority, whilst Nadella (2014) states that anything is possible for a company when its culture is about listening, learning and harnessing individuals’ passions and talents to the company’s mission, whereas leadership is considered as a complex function that can sometimes have an impact because of the leaders’ different mindsets. Such mindsets can lead leaders to contradict what is and what is not functional, it may also be the reason whereby certain management practices, skills and actions lead the business to a less successful road (Uhl-Bien & Marion, 2009).

Although this topic is wide-ranging and incorporates various ideas, concepts and beliefs, this research will focus on why different mindsets impact the leadership styles and how they are being practiced. Traditionally, family-owned businesses had a single powerful leader, as stated by Miller and Miller (2005). Other research studies mostly focus on explaining what the necessary preconditions and outcomes of different leaders and their leadership approach within small businesses are. However, to date, there is a gap in the local research regarding the traditional leaders’ and the modern leaders’ mindset within small businesses in Malta (World Bank, 2013), especially when mindset is considered as a mental lens that leaders use to encode and engage their leadership according to a particular situation. This mindset influences how they act and respond to each other (Crum et al., 2013). However, Madison et al. (2016) has stated that studies have shown that nowadays small family firms are moving towards a more collaborative

model. In this model, multiple individuals may share leadership responsibilities, as it is likely that more than one descendant and/or individual has assumed control of the business, creating what are known as the modern leaders. This often occurs following the preparation or retirement of the previous or current traditional leader.

There are different types of theories pertaining to leadership. Such theories play an important role for the advancement of literature studies (Morgeson et al., 2010). It was not always an easy task to practice leadership, however, the need to lead was always a necessity especially when leading laborers with a lack of knowledge within the industry. The need of such leadership was due to different attitudes, actions, behaviors and lack of management practices that were practiced in the 1900's. Consequently, the respective leaders wanted to develop their leadership practices and hence more knowledge about different leadership theories were introduced.

Leadership highlights pertaining to various theories - from traditional to modern approaches

The study of leadership has given rise to a wide range of theoretical perspectives, each aiming to understand what makes an effective leader. From early trait theories that focus on inherent qualities, to more contemporary leadership models like transformational, traditional, democratic, autocratic leadership and human centered, these established theories provide a foundation for analyzing leadership behavior and its impact on individuals and organizations.

Transformational leadership theory

Transformational Leadership as a theory is considered as a very powerful tool to implement change and reforms within an organization. Leaders embracing this style, aim to understand and support their employees and encourage them to

participate in the business' decision making, rather than underestimating their importance and their significance (Berkovich, 2016). The transformational leader provides the necessary support to the team, to accomplish the desired tasks and reach common goals (Hersey & Blanchard, 1984). Such a leader is not only able to engage and influence others but also has the capacity to introduce the transformational leadership theory and with the involvement of all, create a dynamic relationship between the team (Northhouse, 2016).

Transactional leadership theory

This theory is about the idea that superiors assign tasks they expect their employees to carry out no matter if one has a lead title or role. Leaders embracing such a style give instructions, monitor each piece of work, and ensure that their instructions are followed through whilst being corrected consecutively and delivered on time. It is based on rewards and punishments (Weber, 1980), based on the performance of the person in question. The chain of command must be definite, clear and understood by the relative employees, who must adhere to the leader's instructions to achieve the desired goal. This approach is often considered as the 'carrot and stick' approach. Common characteristics include opposition to change, linear thinking, just-in-time management practices, and conventional decision making. Hence, once the employee has reached the desired goal, navigating the challenges posed by the mentioned characteristics, reward should follow. However, if the employee does not meet the set goal, constructive feedback or guidance may be provided. The leaders that profess this type of theory are more focused on enforcing the current rules, and their expectations are very high. Such leaders forward only constructive feedback and may lack creativity as the same style of leadership is upheld, regardless of the project or time.

Democratic and autocratic leadership theory

As shown in the study about leadership styles (Lewin, 1939), the democratic and autocratic leadership theories are theories that include as much as possible both the leader and the employees. Democratic Leadership is also known as participative leadership, which is a type of leadership where the leaders participate with their employees whilst giving the required guidance on how they can gather more input from other team members to get the job done.

Democratic leaders tend to take immediate decisions and involve everyone they think might help to solve that specific situation; they give their subordinates an equal chance and allow them to participate together. On the other hand, autocratic leadership is based on leaders who rarely accept judgments and ideas from their followers, that is, a style where the leader has total control. These leaders tend to take a decision and once that decision is taken, they impose it on others and expect full obedience to solve the matter. It is also known as monothetic leadership, leaders that have this leadership approach direct their subordinates to do what is to be done and how it is to be done.

Human centered leadership theory

Human-Centered Leadership, as typified by Kennedy, Campis, and Leclerc (2021), focuses on leaders caring for the well-being and growth of their employees. In small family firms, this approach is important because leaders often work closely with their team and family members. Modern leaders in these firms tend to use empathy, emotional intelligence, and support to create a positive work environment, while traditional leaders may focus more on authority and control. By adopting human-centered practices, leaders can improve trust,

teamwork, and employee satisfaction, making the organization stronger and more sustainable.

METHODOLOGY

As previously indicated, this study's principal goal is to discover the impact of the leaders' mindset. Hence a grounded theory methodology is used for this research study, based predominantly on qualitative data. Such research method has at its core, the value of quality, an inductive approach which is associated with the qualitative research aspect and allowing the researcher to gather different patterns through observations while aiding in the collection of the data so that a theory could be developed (Bryman & Bell, 2011). It also allows the researcher to discern explicit and implicit processes in their data.

There are various reasons why qualitative research is being introduced in this study. Particularly, it helps the researcher to find insights and nuances difficult to obtain through a quantitative approach. It also provides tacit data and ensures credibility in results regardless of the size of the sample. Qualitative research is also useful for generating in-depth information that is hard to quantify and helps uncover understandings and experiences that quantitative methods cannot capture. However, as described by both Creswell and Creswell (2018) and Birks and Mills (2014), qualitative methodologies consist of different types of methodologies such as phenomenology, narrative, ethnography and grounded theory.

Grounded theory is a methodology that helps the researcher to discover, develop and generate a theory from the data collected, once observed and analyzed (Creswell, 2013). Grounded theory also allows the researcher to create categories, compare and perform constant comparison with the data analysis and generate new theories that are developed by the interviewees themselves. Glaser and Strauss (1967) state that

grounded theory aims to understand “how circumstances in the social sphere could account for the interactions, behaviors and experiences of the participants being studied” (p. 2). On the other hand, Strauss and Corbin (1998) argue that once that grounded theory is discovered and developed through a systematic collection and data analysis, a phenomenon will be discovered. In this specific study the interpretivist-informed grounded theory was adopted since there are leadership concepts that intertwine in this research context. The researcher focused on the lived experiences of these leaders, focused on the understanding of their mindsets through their own experiences, and delving into the current challenges that these leaders were facing.

Research questions

This research seeks to investigate the key aspects of the leadership approach and the leaders’ mindset through the below questions. These questions have been formulated to clarify the objectives and to provide a structured framework for the investigation:

1. Which mindset challenges influence the leadership approach faced by leaders within small family-owned businesses?
2. What are the most effective ways to supersede these mindset challenges faced by leaders within small family-owned businesses?

Research objectives

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Research design

Grounded theory is a research method that is structured and flexible, yet rigorous (Charmaz, 2006). It also allowed the researcher to study a particular phenomenon, in this case, leadership, and to discover different aspects of the phenomenon. The researcher also considers this approach to be the most appropriate, as grounded theory as a methodology is mainly used to discover attitudes/approaches such as the behavior of individuals, behavior of groups, social relations, and such (Charmaz, 2006). As Charmaz (2006) explains, grounded theory is a method that focuses on generating new theories through inductive analysis of the data gathered from the participants rather than from a pre-existing theoretical framework. Furthermore, the data was systematically collected and analyzed. Charmaz (2006) introduced the constructivist grounded theory variant, which is seen to be a distinctive type of grounded theory, derived from both the Glaser and Strauss versions of the methodology, but placing the researcher as a co-constructor in the data gathering and analyzing process.

Constructivist grounded theory

In research studies the explanations about human occurrences are considered as constructivism and this approach was ideal for the researcher to understand the participants' views. Cohne and Manion (1994) state that constructivist research is an effective method to help the participants express themselves

even when they have more than one experience. This approach helped to construct the researcher's insights and not just be a passive acquirer of information. This method thus further enabled the researcher to reflect and to build further on her existing knowledge, as described by Charmaz (2006).

The participants tended to express themselves and their experiences in depth, especially when their leadership roles were discussed. The constructivist approach was used to address and analyze critical events, and to evaluate the research problem and its objectives. Moreover, the constructivist approach of grounded theory has applied an ontological, epistemological and axiological mindset that is also shared by the researcher in question.

Data collection methods and sampling strategy

For this study, the sampling strategy was introduced that is very much in line with the model of Rizzo, Aquilina and Falzon (2024), as shown in the following Figure 1. The researcher started with a convenience sample of 3 participants who opened their business way back in the 70/80's, a purposive sample of 6 participants who are leaders that lead with their son or relatives at their firm, and a theoretical sample of 3 participants who were willing to leave the business but they were not ready yet for this change.

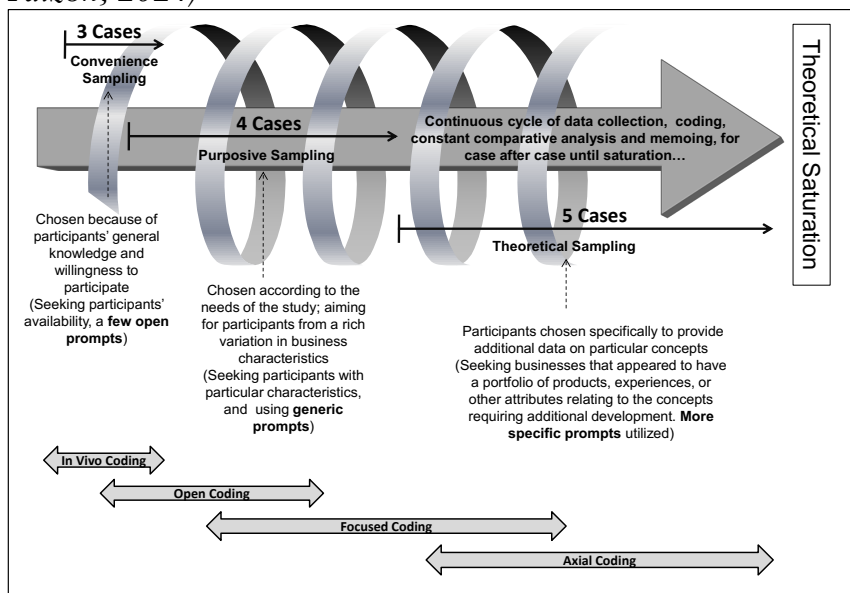
Participants were selected from various operational sectors of small businesses in Malta such as retail, transportation, construction and hospitality service. These small firms were selected since they have less than 50 employees engaged with them on a full-time basis. These businesses have been operating for more than two decades, and the participants held a leadership position, had started their own business and leaders who were a family member leading within the same company alongside other family members.

These leaders were selected because they clearly occupied their position and were able to provide insights into the leadership styles they experience daily. The target sample size for this study was thus of 12 participants, which allowed for in-depth data collection and analysis. Data collection continued until theoretical saturation was reached and indicated that no new significant insights were emerging from the interviews.

The following diagram by Rizzo, Aquilina and Falzon (2024) shows the process of the three main stances that the researcher adopted. This diagram also shows how, in grounded theory, data collection and analysis are carried out simultaneously.

Figure 1

Grounded theory's systematic strategy of simultaneous data collection and analysis (Adapted from Rizzo, Aquilina and Falzon, 2024)



For this study, semi-structured interviews with open-ended questions were introduced, reflecting the research questions. The open-ended questions were introduced to encourage the participants to share their experiences, perspectives, and stories related to their mindset approach and their leadership within their business. Some of the questions asked were related to their effective leadership within the business, their observations and experiences, about their fathers or other related family members. Further questions were asked about factors they believed contributed to or hindered their effective leadership in their small businesses as well as questions regarding the impact of differences in mindset and leadership on their work and the overall business were asked. The interviews were conducted with their consent, recorded and lasted approximately 30 to 45 minutes. All interviews were transcribed ad verbatim to ensure truthful representation of the data.

Data analysis

For this study the researcher adopted the grounded theory methodology, which helped the researcher build a theory that is grounded from the leaders' actual experiences. This meant that leaders were approached, and their daily experiences were carefully listened to, resulting in the collection of cases where each case represented an individual leader. Once the cases were collected, the researcher studied the patterns and the common ideas that were specifically collected from what the leaders narrated by using the Corbin and Strauss approach towards grounded theory. This method aims to explain processes, actions and consequences related to a particular phenomenon (Corbin & Strauss, 2018). It follows a constant interaction between the data collection and the analysis of that data. The steps below outlined by Corbin and Strauss (2018) were introduced as part of the data collection and analysis process.

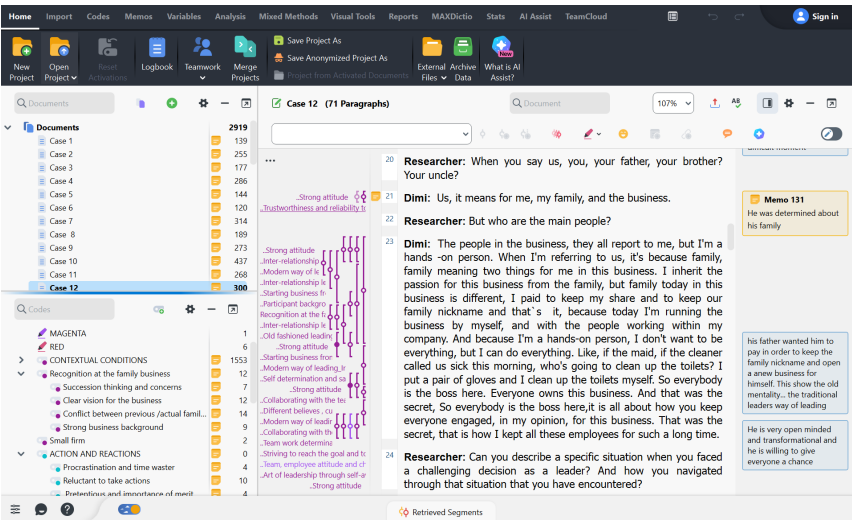
- In-vivo coding was used to generate the preliminary coding schema.
- Open coding was used to break down the data into meaningful segments, which helped the researcher to start assigning the first initial coding schema.
- Focused coding helped the researcher to identify the core category and other related categories and to further enhance the category schema. This method also aided in the amalgamation of the data, which was gathered and integrated, analyzed and placed under related categories.
- Axial coding: this stage was very important because it helped the researcher identify the relationships between the prior mentioned codes, developing the categories and building the framework. For this study the conditional matrix of Corbin and Strauss was used.
- By way of sampling strategy, convenience, purposive, and theoretical sampling were largely used in sequence, to help the researcher collect data and develop an emerging theory.

After gaining permission to conduct the interviews from the relevant higher educational institution's research ethics board and from the respective tutors, the interviews started, with data being collected by interviewing owners/leaders of a selection of small family-owned businesses. According to Rubin and Rubin (2012) there are different ways on how qualitative interviewing can be carried out, such as: focus groups, semi-structured interviews, and unstructured interviews. For this study the interviews were conducted face-to-face, and it was very interesting to observe the rapport established during such interviews. Meanwhile, the researcher observed, gathered data, and took memo notes of the participants' respective stories and experiences. The 12 interviews were conducted with meticulous attention to detail and procedures.

Use of MAXQDA software

Once the data was collected and the interviews (cases as per grounded theory terminology) analyzed, transcribed and heard several times, they were consequently uploaded into the MAXQDA software and in-vivo coding was applied. This software is specifically used to create in-vivo codes, categories and subcategories respectively. Following this in-vivo coding, rigorous line-by-line coding that is called open coding, was applied to enhance the evolving categories, as advocated by Birks and Mills (2015). Following open coding, the more conceptual focused coding was conducted, closing off with axial coding that looked particularly towards the integration and inter-relation of categories within the evolving category schema. The following figure shows the category schema, memos, comments and a case analysis part which was analyzed using MAXQDA software.

Figure 2
MAXQDA-based research analytic process



Use of memos

The researcher applied detailed reflexive writing using memoing. Memoing works by sorting out data, highlighting the most important aspects, listing the participants' respective feelings and attitudes, while forming ideas and testing the reliability/validity of research thus enabling the researcher to gather the information whilst selecting data. Consequently, once such information was coded and categorized, it was then transformed into grounded theory findings.

Birks and Mills (2015) argue that memos are a very important tool that the researcher must use to keep a record of that particular moment. Charmaz (2006) emphasizes that memoing is a tool that helps the researcher to be more effective and efficient through the research process. While Birks and Mills (2015) state that memo writing is an ongoing activity, aiming at constantly enhancing one's theoretical sensitivity. It must be highlighted that the researcher experienced a lot of emotion whilst conducting the interviews. For example, one of the participants was very emotional, another one was very tense, and a third was very outspoken and kept on smiling excessively during the interview.

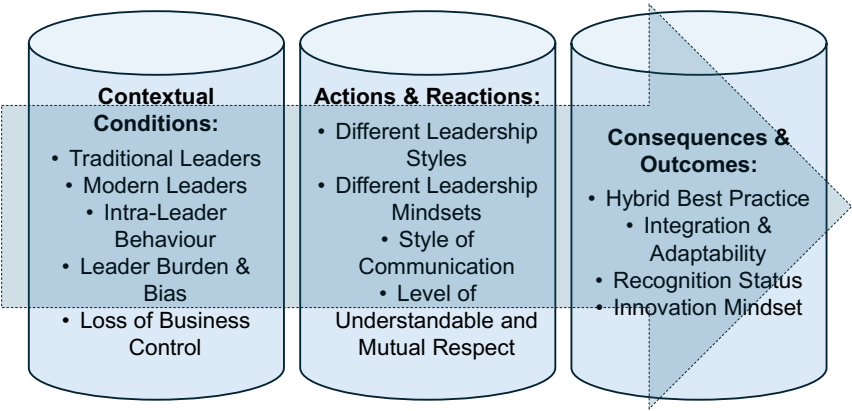
The Corbin and Strauss conditional matrix

The Corbin and Strauss (2015) conditional matrix was introduced to help build an early category schema, encouraging a focus on context, actions, and consequences to those actions. This matrix helped the researcher to analyze the data about the different aspects that leaders face because of the myriad mindsets in question.

The figure below (Figure 3) shows the interplay of contextual conditions, actions and reactions, and consequences and outcomes, mapping out these various leadership mindsets. It helped the researcher to ultimately explore the different

conditions and aspects concerning the different leadership constraints. This figure also contributed to giving the researcher a good insight, and rich, grounded understanding of the leadership phenomenon.

Figure 3
The conditional/consequence matrix (Corbin & Strauss, 2015) with emerging categories



RESULTS, DISCUSSIONS AND AN EARLY LEADERSHIP MODEL

From the researcher’s perspective, it was clear that differing mindsets had a significant influence. As suggested by various leadership theories discussed earlier, effective and ethical leadership requires adherence to specific processes aligned with established theoretical models. A key finding of this study was the identification of a research gap, indicating that leadership likely plays a crucial role in shaping important outcomes such as communication, employee well-being, and organizational performance. Consequently, the researcher raised questions about the difference in the leaders’ mindset which is affecting

the leadership styles and behaviors within these small family firms, as well as how these experiences and outcomes are affecting the concerned members. As a result of this inquiry, the researcher concluded that an early conceptual model to help overcome these differences in mindsets is highly needed.

These differences were the hybrid method, which was raised after covid, the adaptability and integrated factor to have a good relationship, the recognition that both leaders need since they lack in their mutual respect and the innovation aspect that for nowadays business cannot continue grow without such factor. All these four factors are very prominent factors in the leadership dynamics. From the analysis it emerged that there are two different types of leaders: the traditional leaders, who established and grew the business and are currently between 55 and 74 years old and the modern leaders, who are leading under the supervision of their family members and are expected to succeed them in the future in the future. The modern leaders' age ranged from 28 to 45 years.

Since both traditional leaders and modern leaders mentioned and raised a very good point during the interviews about why both leaders restrict themselves and object from being the leaders they want to be, the researcher came up with the HARI model from the analysis. The HARI model stands for Hybrid, Adaptability-Integrated, Recognition and Innovation. This theoretical model offers a fresh perspective in relations to the leaders' mindset and brings together the formation and coherent insights that these different mindsets bring. This concept was suggested and is optimal to be implemented, since it is based on fundamental leadership concepts, consequences and actions. Since leaders hold higher hierarchical positions and must take control of such actions, it is empirical that a balance between both leaders is maintained.

Hybrid best practices

The hybrid factor emphasizes being flexible and available at the same time, since studies showed that traditional leaders want the modern leaders always at the office and the modern ones want to reach out for new innovative business ideas, the hybrid model will help to eliminate the need for singular presence at work. Rath and Conchie (2006) indicated that leaders need to trust and have stability with communication and confidence, so, they can lead the business towards a better future. They also stated that leaders are to recognize when they are not right and they need to change their mind instantly. During the interviews, two of the participants stated the following in relation to the hybrid factor:

Participant 10: “Covid brought many challenges and wasn’t easy, we juggled to continue with our work, but with the help of innovation and technology, we managed to continue. It was very hard because for our father, this was something new and when he saw the offices empty without employees, he was frantic, but I managed to persuade him to adapt to such changes.”

Participant 12: “My Uncle and my father are very old, and they are not used to nowadays’ technology. They wanted us to stay at the office; they don’t understand that we were obliged by the government to work from home. I tried to explain to them that with technology, we can continue to export and import our products. They decided to go to the premises, but my cousins and I opted to continue from home and believe me we worked more. We worked serenely without listening their grumbling. We managed to introduce our product internationally, and we earned a lot of money. We are still working three days a week from home; and believe me, we had and still have some arguments, but they have become fewer, and there is also less stress”.

Adaptability and integration

Both leaders demonstrated emotional and behavioral intelligence, so both types of leaders must stay composed and show empathy when under pressure. They also need to adapt according to situations, especially during disagreements. They both need to be respected so they both need to modify their anger and their actions. They need to continuously adapt and integrate, they need to act as moderators so to strengthen their communication and solve the problems together, for both their sake and the business'. They need to stay aligned and focused and need to change their approach and have a volatile attitude, keeping themselves engaged for their psychological safety and wellbeing. With regards to adaptability, some of the participants stated the following.

Participant 5: "Together, we need to adapt and evolve to secure the future of our business."

Participant 7: "We must both embrace change and collaborate to ensure the business continues to grow."

Participant 9: "We both need to adapt to new changes, and we both need to integrate in order to continue with our business."

Participant 10: "He is a very hardheaded person, but he needs to start understanding that all we do is for the continued success of our business."

Participant 11: "It is not easy to change their mind, but we need to arrive at a solution. They need to start to adapt and integrate into the new technology era".

Recognition status

The recognition factor was very lacking. It was evident from the cases that both traditional and modern leaders were not praised for what they do. Modern leaders don't receive

recognition from their fathers or uncles and vice versa for traditional leaders. This clearly shows that the situation is neither fair nor just, especially since both are trying to keep the business alive and ongoing. Both leaders do not acknowledge each other's impact and hence they have less power to inspire and move forward. Both leaders have done and are still doing their utmost for the business, yet they are not praising each other. The son wants to be recognized by his leader, and the father wants to be praised by his son. It was also shown that, without recognition, the strategy may be hindered, however both leaders wanted the same thing: to reach the goal and make it meaningful. The desire for recognition from their elders was profound, as expressed by the participants themselves:

Participant 6: "My father resists and doesn't accept to see me as his successor now. He insists on doing things his way, constantly reminding everyone he built the company. I respect his hard work, but it's frustrating, he needs to trust me and let go. I want his recognition now, not someday when it's too late."

Participant 9: "My father doesn't recognize me as his successor. He wants to keep on doing everything his way. I know that he founded the company (because he continuously states this), and he worked very hard, but on the other hand, it is very frustrating. He needs to trust me and understand that he is to leave everything here when he passes away. I want to be recognized by him today, not God only knows when, it is not easy believe me."

Participant 12: "My Uncle and my father are very much into the business; they don't recognize the effort and the good work that my cousins and I do for the firm. They think that they are going to stay here in this world forever, but when we are in the middle of an important negotiation, they admit that they are not up to our level. They recognize us the way they want and this is frustrating, we need to be recognized today, not after they pass away."

Innovative mindset

The tension between the two leaders has its roots in the type of leadership and mindset that both adopt. The effect of growth, their fixation on the business and especially the fixed mindset of the traditional leaders was highly noted.

There were two aspects which the researcher found from the analysis in relation to innovation, these are: frequent litigation and lack of communication when innovation is debated. Another factor was that both leaders need to be themselves when discussing innovation and should avoid being too personal, as during discussions, fear was observed on the traditional leaders' faces. Hence, all this outlines that the behaviors of both leaders' needs to be changed.

Overall innovative change is a very crucial aspect that holds great importance for the business. When asked about innovation, the participants stated the following:

Participant 8: "We cannot continue to grow if we don't open our company for innovation".

Participant 10: "Innovation is something alive; it is like the bread that we eat every day. Without innovation we cannot continue blooming". Innovation is part and parcel with technology and new ideas."

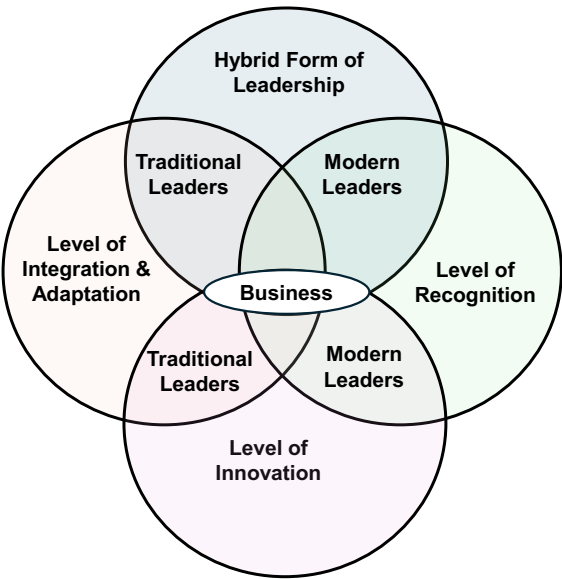
Participant 11: "Innovation, Innovation, Innovation— it's a simple word to say, but this word is the lifeblood of our business. When a new item is introduced, new customers come in and we have more profit. Through innovation, we focus a lot on new products and services, we try to do like similar firms do, so we continue growing."

Participant 12: "For my father and uncle, it is a bombastic word. For them it is important to continue providing our service locally; they keep on telling us that that is enough. But for us, (my cousins and I), we continue to seek for different service internationally, and we managed to open a little trucking service in Italy. This service opened new

horizons for us because we were open for this new innovative idea. In fact, we deliver the products and offer the service form Italy to Poland, Belgium, France and to other countries in that area. This is all done by the system that we bought. We have an app; we have clients who downloaded the app, and instantly we have customers to use our delivery services.”

Based on the participants’ views, the researcher amalgamated the factors into the early conceptual model as seen in the following figure 3 and as was explained above. This model emerged from the analysis of the participant cases and will be of help to both leaders.

Figure 4
The early HARI leadership model for small family-owned businesses



DISCUSSIONS

The purpose of this study is to help the business advance further through a healthy leadership relationship between the traditional leaders and the modern leaders. Leadership is often about power and authority, but in this case, it is all about a theory that offers a hopeful perspective. The researcher position is that leaders and leadership cannot be separated and must move together.

In this study, cases have shown that a dramatic situation between the traditional leaders and the modern ones was inappropriate. One cannot build something that the other is ready to destroy due to stubbornness or because of different mindsets. Both leaders have different personalities and therefore, their mindsets are different. If leaders don't agree on various situations the business cannot move forward and thus the leadership approach cannot be considered as integrated. Unfortunately, if the link between the leaders is broken because of different mindsets, the leadership sphere will be weakened and will affect the various levels of the business. Following are four propositions about leadership that the researcher is proposing, building upon this early HARI model. These propositions incorporate and help to sort out the imbalances and difficulties that leaders' mindsets often experience.

Proposition 1: Leaders should work towards having a high level of direct communication and understanding with each other. They need to enhance their level of self-reflection and aim to identify communication problems that negatively influence their interaction with each other.

Proposition 2: The more modern leader, wishing to propagate the family business, will need to have a clear vision, think critically, and constantly reflect on a strategy that will allow for better synergizing between the more traditional leaders.

Proposition 3: The synergizing of both traditional and modern leaders results in them working more effectively together,

and more strongly appreciating the need to communicate with each other about a vision for business continuity and growth.

Proposition 4: The hybrid leadership concept allows leaders to maintain a balance between themselves and their work. This is of benefit for both leader types, ensuing a stronger level of wellbeing and sustainability.

While there are many studies on leadership styles which have engulfed literature with several theories, few theories have been established on the leaders' mindset phenomenon. It is indeed a delicate subject and is undermined within small businesses. It is clear that leadership often entails more than just guiding and collaborating with the team, but it requires that leaders act as coaches and mentors between themselves as necessary. Both leaders are to maintain and support their wellbeing. It is imperial to avoid negative feedback as such feedback may impact their mindset, hindering them from running the business effectively.

This qualitative research confirms that, based on the leaders' preferences, both leaders should choose and find an incentive method that benefits them both. Both leaders are to respect each other, and with the proposed model, they can achieve excellent performance together. The creation of the final model will link both leaders, give them courage to lead and help them override the fear, as emphasized by Martin Luther King (1963) "*Courage faces fear and thereby master it*". Hence both traditional leaders and modern leaders can overcome fear through training and guidance, which is crucial for sustaining their business's success. Both leaders will share their wisdom and experiences as leaders should do.

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AI AND WRITING COMPETENCES - TRANSFORMING CLASSROOM PRACTICES AND STUDENTS' PERFORMANCE

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Mariana Martins³**

Abstract

Writing is central to learning, communication, and school success, yet difficulties identified in national tests (IAVE, 2024) compromise these goals. Guided by the question “How can AI contribute to learning to write?”, we sought to analyze not only the potential benefits of AI technology on student performance in a 5th grade class in Portugal, but also its impact on motivation. Two main objectives were set: (i) to assess students’ knowledge of the stages of the writing process - planning, text production and revision (Flower & Hayes, 1981); and (ii) to analyze the effect of AI on learning to write, exploring qualitative and motivational improvements. Using a Design Based Research (DBR) approach (Mazcardo et al., 2016), the intervention combined a writing script and the Magic School platform. Results showed that students struggled with textual planning and were unfamiliar with the structured writing process. However, AI increased engagement and improved text quality, demonstrating its potential to transform teaching and enhance writing instruction.

Keywords

Artificial intelligence, writing skills, design-based research; student engagement; 5th grade

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INTRODUCTION

Recognizing the central role of writing in writing and communication and its importance for academic success and social participation, this study aims to investigate the influence of Artificial Intelligence (AI) on the development of writing skills among a class of 5th grade students in Portugal.

This problem arose from the difficulties identified in national benchmarking tests in writing (IAVE, 2024), which certainly jeopardize school success and social inclusion. Just last year, students in the 5th grade were assessed in the writing and had, in our view, results that require reflection from the Portuguese government and the scientific community. In fact, only around 17% of the students assessed were able to respond properly, as can be seen in Table 1.

The table mentioned shows the difference in writing results between the students who “Achieved” and the students who “Couldn’t do it or Didn’t answer”. First, although the difference is not extreme, it shows that more students experienced difficulties. It is also interesting to note that the percentages of students who “Succeeded” and those who “Had difficulties” are practically the same. This suggests that a significant number of students have (many) difficulties with the written expression, since, on top of this, almost half of those assessed, around 40%, “Succeeded, but...” – in other words, it is possible to conclude that a significant proportion of students need to improve their writing skills.

Despite the need to improve writing proficiency, as identified in national assessments, there is a lack of research examining innovative digital interventions in the Portuguese educational context. This is a worrying gap, since writing proficiency is essential not only for academic achievement, but also for equitable social participation. The use of artificial intelligence (AI), specifically tools that can help planning, writing, and reviewing processes, offers a yet underexplored field for

cultivating these skills. By personalizing learning pathways, delivering real-time feedback, and promoting student engagement, AI has the potential to fundamentally transform writing instruction. Therefore, this study also pretends to contribute to this emerging field by empirically evaluating the results of AI on writing development.

In light of these contexts – writing assessment, and the use of AI, the following research question was defined as a starting point: How can AI contribute to learning to write? To answer it, two main objectives were defined: (i) To assess students' knowledge of the stages of the writing process – planning, writing and revision (Flower & Hayes, 1981); (ii) To analyze the effect of AI on learning to write, exploring qualitative and motivational improvements and increased in literacy rates.

This article is divided into five sections: the introduction, which includes the problem and the objectives of this research, the review of the literature, the methodology, results, discussion and conclusions.

REVIEW OF LITERATURE

This section is divided into two subsections. The first is centered on the process of writing, while the second is centered on the use of AI in education.

Writing process

It is now widely accepted that learning to write is a systematic, process-oriented activity involving planning, text production and revision. As conceptualized by Flower and Hayes (1981), these components must be understood as recursive and non-linear parts of a complex cognitive process. When these components are automatized early on, they are even associated with cognitive gains (Moreno *et al.*, 2022, p. 3).

The effectiveness of writing instruction also depends on the students' actively engaging with each of these components, ideally with the support of appropriate materials, as well as peer and teacher interaction. If "learning to write is a constructive, interactive and contextualized process" (Allal, 2003, p. 140), the teacher's role is indeed central in guiding students through each step of the writing process (Teixeira et al., 2011).

Moreover, research by Bruning and Horn (2010) suggests that students benefit from being presented with "complex writing tasks in manageable parts; being helped to set specific, proximal goals; receiving feedback on progress toward goals; and learning writing strategies and when to use them" (p. 34). Importantly, Boscolo et al. (2012) distinguish between complexity and challenge, showing that well-calibrated, challenging tasks foster motivation—unlike "low-challenge tasks" (p. 32). With right support, young writers can push beyond the boundaries of convention, engaging in planning, drafting, and revising texts in increasingly sophisticated ways (Rowe, 2008).

Planning

Students often overlook the planning stage, starting to write without first considering what or how they intend to write (Balbeira, 2013). This is partly because planning mostly occurs at a mental level, requiring students to become aware of contextual parameters and genre-specific features, and to generate and organize content regarding purpose and audience (Balbeira, 2013; Carvalho, 2001).

In fact, from a cognitive point of view, planning supports goal setting, content activation and selection, and structural organization (Pereira & Graça, 2015), drawing on processes such as information search, recognition of communicative intent, and textual knowledge (Gomes et al., 2016). In this sense, the writer's long-term memory and production context, as

outlined by Flower and Hayes (1981), play a crucial role in shaping the planning process.

However, it should be noted that generating content depends heavily on familiarity with the topic. This is why many (young) learners struggle to produce enough content, either because they have limited prior knowledge or because they find it hard to access known information without prompts (Carvalho, 2001).

In this context, planning is crucial, as it involves adopting the reader's perspective and anticipating areas of potential ambiguity. This facilitates the shift from communicating knowledge to transforming it (Bereiter & Scardamalia, 1987). To facilitate this process, which is strongly correlated with text quality (Santos, 1994), teachers may resort to tools such as brainstorming, reading similar texts, diagramming ideas or presenting orally in class (Barbeiro & Pereira, 2007), helping students to move beyond the misconception that planning is the same as drafting (Carvalho, 2001).

Text production

Text production is the component of the writing process that typically engages pupils the most, as it involves processing many elements simultaneously, and because the written text emerges from this sub-process (Carvalho, 2001). It involves transforming mental ideas into visible language (Flower & Hayes, 1981) and organizing linguistic expressions into sentences, paragraphs and sections (Pereira & Graça, 2015).

According to Barbeiro and Pereira (2007), pupils engage in three core tasks: clarifying the ideas activated during planning; expressing them linguistically; and articulating them within a coherent whole – a text is more than a sum of disconnected sentences, it must exhibit cohesion and logical coherence. Therefore, one of the greatest challenges in this component is presenting the ideas in a clear, linear manner, even if they are

structured differently in the mind (Carvalho, 2001). As Ramos (2006) explains, this requires the ability to express semantic relationships, such as cause and effect or contrast, using the correct linguistic tools.

This stage presents specific challenges for younger learners who have not yet developed automatic spelling and motor skills, which restricts their capacity to engage with deeper textual dimensions (Carvalho, 2001). Given this complexity, Barbeiro and Pereira (2007) advocate the use of collaborative tools such as drafts and writing journals because they can support pupils in articulating and reflecting on the difficulties they encounter, thereby promoting greater metacognitive awareness and engagement with the writing process.

Revision

The revision component involves a backward movement that “takes place through the reading, evaluation and eventual correction or reformulation of what has been written” (Pereira & Graça, 2015, p. 200) and is closely linked to text production. As Gomes et al. (2016) explain, revision is a dynamic process of writing and rewriting, guided by continuous monitoring of the text’s structure, meaning, communicative goals, production context, and linguistic conventions.

Therefore, the revision cannot be reduced to mere rereading or superficial correction, nor can it be seen as the final step of the writing process (Carvalho, 2001). Instead, given the recursive nature of writing, revision can occur at any stage, prompting new cycles of planning and composition. Like planning, this sub-process requires abstraction and mental reflection (Barbeiro & Pereira, 2007).

Developing writers, usually children and adolescents, tend to focus on correcting surface-level errors rather than global meaning and structure (MacArthur et al., 2003). This is partly because their cognitive resources are still fully engaged in text

production (Carvalho, 2001). To counter this, Barbeiro and Pereira (2007) propose facilitative strategies such as co-constructed checklists and correction guides to promote greater textual awareness. They also underline the importance of collaborative revision, through peer review and feedback.

In addition, digital tools such as word processors with change-tracking features can facilitate reflective writing by enabling writers to visualize and consider various revision options (Barbeiro & Pereira, 2007; MacArthur et al., 2003).

AI in education

According to Gomes (2013), current technologies can promote a differentiated form of education grounded in freedom and horizontality, in which pupils play an active role in their own learning, shifting the focus from the teacher towards the learner. In this sense, it is not only pupils, teachers and other educational agents who are actors in the school context; technological tools such as artificial intelligence (AI) can also be included in this ecosystem.

Oliveira (2019) argues that AI can contribute to a more tailored approach to teaching by addressing the specific needs of each learner. This could potentially make AI an ally to both pupils and teachers, offering diversified activities and appropriately adapted assessments. However, the author (Oliveira, 2019) also noted that the integration of AI in schools can be complex and contentious, as some scholars are concerned that AI may eventually replace teachers. Nevertheless, as AI has not yet passed the Turing Test due to its lack of emotional intelligence, it is unable to replicate the work of teachers, whose role extends far beyond the mere transmission of information to encompass empathy and emotional connection with learners.

It should be noted that AI did not only emerge in the 21st century – according to Holmes et al. (2022), it dates to the 1930s and the development of early teaching machines.

Moreover, teaching and learning processes have undergone significant transformations over time due to sociocultural and technological shifts, such as increased access to media and the internet (Santos et al., 2021). However, the role of the teacher has yet to be challenged.

The reality is that following the outbreak of the COVID-19 pandemic, all pupils in Portugal now have access to computers and mobile devices, opening up the potential for increased classroom motivation with such technologies.

For example, Coelho et al. (2023) argue that the use of AI in educational settings can improve the effectiveness of the teaching and learning process by enabling personalized and adaptive educational experiences. While AI remains a contentious issue, particularly with regard to challenges such as ensuring pupil data privacy and security, these authors argue that it has the potential to transform education.

Kloeckner et al. (2023) emphasize that AI can help pupils gain insight into their learning patterns and behaviors. For example, it can show them how long they take to complete a task and which errors they commonly make. This fosters the development and regulation of learning strategies, as these systems record past activities that can be accessed by teachers and pupils alike to analyze progress. The authors (Kloeckner et al., 2023) stress that these educational technologies become more effective when used to personalize differences in pupils' self-regulated learning.

AI may also foster enhanced interaction between teachers and pupils by helping to define learning objectives that align with educational content. These systems integrate a wide range of features designed to identify key aspects of learners and the various ways they can engage and respond to one another, thereby enabling education to go “beyond” (Zatti et al., 2022).

From a writing perspective, AI tools have also generally demonstrated their potential to improve written proficiency in terms of textual organization, coherence, grammar and vocabulary (Song & Song, 2023), as well as fostering students' metacognitive skills (Arseven & Bal, 2025), which are essential to the writing process. There is also growing evidence of their ability to increase student motivation (Jauhiainen & Guerra, 2021; Stornaiuolo et al., 2024). However, there is a risk of negative consequences, such as cognitive effort saturation or cognitive replacement (Bakken et al., 2025), which once again puts the teacher center stage.

METHODOLOGY

This study adheres to the following characteristics of qualitative research outlined by Bogdan and Biklen (1994): (i) it is inductive in that the data collected and analyzed generate understanding through emerging patterns; (ii) it is descriptive in that the researcher conveys the collected data through rich and reflective description; (iii) It is humanistic, in that researchers seek to engage with and experience the contexts alongside the participants under study; and (iv) it is process-centered, in that the process is considered more important than the outcomes.

Research design

In particular, it adopts the design-based research (DBR) approach, a flexible methodology aimed at improving educational practices through participation, analysis, development and implementation, involving both researchers and participants (Mazzardo et al., 2016). Peterson and Herrington (2005) highlight the contributions of Reeves (2006), notably through the reference to the general diagram of the various stages of DBR, as can be seen in Figure 1 – DBR Diagram.

Thus, in line with the principles set out in the diagram, this study employs the DBR approach as follows:

- i) Analysis of practical problems by researchers and practitioners, as identified through IAVE results and by the cooperating teacher.
- ii) The development of solutions grounded in theoretical frameworks using AI platforms.
- iii) the documentation and reflection process aimed at generating design principles.

Participants

The participants in this project are part of a Year 5 class of 20 pupils. However, only 18 of them took part in the study, since pupil O11 is a non-reader and, therefore, does not write, and the project is based on writing activities, and pupil A3 is subject to additional support measures and is unable to produce written texts.

Data collection methods

In terms of the tools used for data collection, Magic School – an AI platform for writing support – was employed. This platform allows for multiple uses, such as creating lesson plans, assessments, emails and written texts. The feature employed in this study was Raina, a chatbot that enables users to ask questions and receive answers, functioning similarly to ChatGPT. In the context of our study, this resource was used to support pupils in creating a textual outline and subsequently improving their written texts, that is, during the revision process.

Preparatory work

To implement these activities effectively, the teacher had to carry out preparatory work. This involved several trials

prompts directed to Raina (chatbot) to enable adequate guidance of pupils formulating precise prompts to yield the intended responses – we didn’t want the platform to do their work for them; we only wanted it to help them. Therefore, we tried three attempts to guide students properly (see Table 2).

Following these attempts, we were able to create the first didactic materials for the pupils using the AI platform – Magic School (see Figure 2). We selected the final two questions – “List only topics for a text on ‘What is school?’ for 10-year-old pupils” and “List only topics for a descriptive text on ‘What is school?’ for 10-year-old pupils” – which generated more concise responses that encouraged pupils’ critical and creative thinking and were focused on descriptive writing.

This didactic material contained step-by-step instructions for using the platform successfully, as well as the specific questions required to complete the assigned task. Initially, a single shared account had to be created for all pupils so that we could monitor whether they had completed the activity. Since all pupils used the same account, all submitted prompts were saved, enabling the trainee teacher to access them at any time. This procedure also made it easier to preserve pupils’ personal data, since they were using the trainee teacher’s account.

Later, in order to continue monitoring the pupils’ work, it became necessary to create two sets of accounts: one for the teacher and one for each pupil. This was because pupils could only be added to the system via their teacher's account. To facilitate this, a table was created with two columns: one for “nickname” (the nicknames were invented by us to maintain anonymity) and another for “password”, allowing each pupil to access the platform. This table was necessary because the data (nickname and password) disappeared once entered into the platform, and we needed to retain them in order to track pupil progress and document it in this Report.

We would like to highlight that in order to produce instructional materials for the pupils, specifically to indicate the steps they should follow to log in and complete the tasks, we also had to create a pupil account ourselves.

Intervention

The didactic intervention consisted of one instructional sequence, which was carried out over two lessons. A summary of this sequence can be seen in Table 3. Overall, the pupils responded positively to the sequence and were motivated by using computers in the classroom, which we considered to be beneficial for the activity.

First, they did the textual planning on the Magic School platform, and then they moved on to the writing stage. As they had previously struggled to use the computer properly, inadvertently deleting their work, we asked them to write the texts manually on the worksheet we had provided. Afterwards, they copied the completed texts to the platform, asking if their texts were in line with the intended textual typology, i.e. a descriptive text: “Is this text written in accordance with the characteristics of descriptive text?”. This question was provided by us and was the result of previous attempts, so that we could guide the pupils properly – we reiterate that AI cannot replace the teacher.

We then concluded the sequence, in which we identified inaccuracies in the descriptive text and once again questioned the Magic School platform about the tasks needed to overcome them. As all the students used our account, we analyzed the suggestions provided by the platform to see if they were appropriate. We found that they were appropriate, as they included suggestions relating to punctuation, syntax, and lexical substitution. The students were instructed to implement these suggestions independently until a later date.

RESULTS

We found that the pupils struggled to plan the text, which somewhat validates the difficulty young writers face when planning, given that it involves a set of naturally abstract cognitive processes (Balbeira, 2013; Carvalho, 2001b).

This also prompted us to review our own materials, and we realized that the requested topics were not as clear as we had initially thought. The participants were confused by the fact that we had labelled some topics ‘General elements...’ and others ‘Specific elements...’, as they did not realize that these were referring to the same topic in more detail (see Figure 3). This highlights the important role of the teacher (Teixeira et al., 2011) in ensuring that tasks are valid for the intended goals and guiding students towards them.

However, this fact alone does not justify pupils’ difficulties with planning. As can be seen in Examples 1 and 2 (see Figures 3 and 4), Student 7 later wrote short paragraphs in response to the chosen topics in the planning and writing phases. Rather than producing the requested descriptive text (Example 2), this student (and some others) essentially copied the plan. We therefore concluded that the plan was not intended as an aid, but rather as a kind of ‘draft’, which reiterates the notion that pupils often have the misconception that planning is the same as drafting (Carvalho, 2001).

Nevertheless, despite the difficulties experienced, some participants managed to complete the planning objective. Figure 5 shows the topics in their plans and the resulting text: first, we can see clear, short sentences that later resulted in a structured, organized text. However, it still falls short in terms of the characteristics of descriptive texts.

We will now analyze the answers obtained by the Magic School platform in relation to textual planning. Overall, the platform provided straightforward answers, which was our objective, enabling students to select their preferred topics

while encouraging them to consider what they were going to write.

As can be seen in Figure 6, the platform suggested seven topics, whereas in Figure 7, ten were suggested. This is interesting to us when it comes to using this type of platform, since the same prompt generates different responses in terms of both quantity and content. It should be noted that students only had to choose one topic, which would then be carried out according to their preferences.

After completing the checklist of aspects to include in their texts, participants were asked to indicate what they wanted to improve after their interaction with the Magic School platform. These findings suggest that the use of AI can improve engagement and writing quality.

At this stage, the students copied their text into the platform (see Figure 8) and asked whether their text adhered to the characteristics of a descriptive text and, if not, how they could improve it (see Figure 9). The platform then provided suggestions for improvement, but did not rewrite the text. From a didactic point of view, it was important to ensure that the AI did not replace the effort that students needed to put into their work, thereby counteracting the unintended consequence of allowing AI to replace pupils' cognitive effort (Bakken et al., 2025).

In line with this, some of these suggestions were included in the texts after the students had discussed them in pairs under the teacher's supervision. Interestingly, our intervention in the discussions was practically non-existent, as the students were able to reach the appropriate 'conclusions/integrations'. According to Oliveira (2020), encouraging students to discuss results in pairs instils a sense of responsibility in them to achieve goals, and they sometimes become concerned about their colleagues' learning, trying to promote greater success in their collaborative work.

In the next class, to conclude this activity, the students interacted with the Magic School platform again. They copied their texts, which already had the changes made in the previous class, and asked the platform, ‘What errors occur most frequently in this descriptive text?’ (Figure 10), and, ‘What tasks can I perform to improve those errors?’ (Figure 11).

We would like to point out that the results of the final part of the activity, in which Magic School offered suggestions for improving descriptive texts, were not as expected due to time constraints. In other words, it took students longer than in the first class because they had to copy the text back into the computer.

Once this stage was complete, the students copied three suggested tasks into their daily notebooks. They then had a week to complete these tasks in order to improve their descriptive writing for a second teaching sequence of the project, which we will not discuss here. They could choose the three tasks independently but were told beforehand that they should be tasks that fit with the errors identified — that is, tasks that would help them overcome the difficulties detected. The results of the text improvements were positive: it was observed through the tasks carried out later that the students improved their compositional skills.

Finally, we asked Magic School the following questions: ‘Do you correct the text?’ (Figure 12), and ‘Why did you replace “teach” with “teach (in Portuguese: for ‘ministram’, a synonymous)?’ (Figure 13). We had not had the opportunity to experiment in the classroom, so we asked these questions to understand whether the platform could eventually help students to understand better by explaining why they had made mistakes, or if it simply did the work for them without providing any explanations. Although there was no student participation, we consider it important to understand how the platform works and how we could use it more effectively in future.

Most of the justifications were so that the texts would acquire a more formal tone, reflecting the importance of the educational process of transmitting knowledge to students. It should be noted that, in our view, teachers do not transmit knowledge to students; rather, they transmit information. It is the students who construct their own knowledge based on this information and other sources. In a real classroom, it is the teacher's role to validate and demonstrate to students what is accurate and the limitations of these tools.

To complete these findings, we sought feedback from the students on the activity. To this end, we wrote some questions on a board and asked the students to answer "Yes" or "No" to each one, justifying their answers where necessary.

In response to the first question "Do you think that using technology in the classroom made you more motivated for the proposed lesson? Why?" (see Figure 14), only one student answered "No", explaining that it was "Because I'm not very good with computers".

Regarding the second question, "Did the Magic School platform help you plan and revise your text? Why?" (see Figure 15), there were only three negative responses. Of these, two provided a similar explanation: "Because Raina didn't give us clear answers" and "Because it didn't help us with what we needed".

Regarding the third question, "Did you find it difficult to use the Magic School platform? (see Figure 16), only one student answered "Yes". This was the same student who said that using technology in the classroom did not motivate him for the lesson. After talking to him, we realized that he had answered negatively to the first question because he found the platform difficult to use. Therefore, if he finds it difficult, he will not feel motivated or enthusiastic about using this type of tool.

Moving on to the last question "Would you like teachers to use computers more in their classes?" (see Figure 17) only one

student answered “No” and another, despite having answered “Yes”, added “But not in all classes”. Once again, the same student who answered ‘No’ is in the same situation, and his answer reflects the difficulties he experienced.

Building on the students’ final response, we also believe that a balance is necessary, as AI cannot replace personal experience, which is essential for writing (Arathdar, 2024). Even reading and interpretation depend on the cultural context of the reader.

However, as mentioned throughout the work, the multiple benefits of AI in the classroom should not be ignored. AI promotes greater motivation in students for classroom activities, not only due to the use of computers, but also because it enables them to develop their writing skills gradually. As it motivates students and helps teachers, we consider it to be an asset in teaching.

DISCUSSION

This study sought to understand how Artificial Intelligence (AI) could contribute to learning to write, prompted by concerning national assessment results (IAVE, 2024). The intervention confirmed existing literature (Balbeira, 2013; Carvalho, 2001), as it revealed that the participating 5th-grade students had not yet mastered the different stages of the writing process. Most struggled significantly with planning, often conflating it with drafting, and failed to grasp the full characteristics of a descriptive text. However, the integration of the Magic School AI platform provided valuable scaffolding that led to noticeable improvements in students' revision skills and the overall quality of their texts.

A key finding was the notable increase in student motivation and engagement, with pupils themselves reporting positive outcomes. Despite the initial challenges, student autonomy developed progressively during the activity. These results

demonstrate the potential of AI to act as a catalyst for transforming classroom practices by providing personalized support and making the revision process more interactive and accessible. However, this study also underscores a central caveat: structured guidance is essential for the effective integration of AI. It is only when combined with teacher feedback that AI creates a powerful synergy that enhances the learning process. The role of the teacher remains paramount in curating AI interactions, interpreting outputs, and facilitating the critical discussion necessary for deep learning.

CONCLUSIONS

The findings from this research lead to several concrete recommendations for practice and policy. For classroom teachers, the effective integration of AI into writing instruction necessitates a proactive and reflective approach. Firstly, it is crucial to dedicate explicit instructional time to deconstructing the writing process, ensuring students understand planning as a distinct conceptual phase rather than a first draft. Secondly, teachers should invest time in curating and testing AI prompts beforehand to ensure they are aligned with specific learning objectives and genre requirements, thereby focusing student interactions and maximizing efficacy. Furthermore, the AI's role should be that of a catalyst for dialogue; teachers are encouraged to structure sessions where students collaboratively evaluate AI-generated feedback, thereby fostering metacognitive skills and critical thinking. Finally, a balanced pedagogical approach is advised, where AI is used strategically for specific tasks but not at the expense of analogue exercises that are essential for developing a personal voice and foundational skills.

In conclusion, AI presents a transformative opportunity to address critical challenges in writing education. By adopting a critical, informed, and teacher-centered approach, we can leverage these tools to encourage not only better writers but also

more engaged and metacognitive learners. The success of this integration hinges on a shared commitment to thoughtful implementation, ongoing research, and robust support for educators.

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APPENDICES

Table 1

Portuguese assessment tests (writing) in the 5th year of schooling

Portuguese assessment tests				
Writing	A	SB	HD	CD/DA

Source: Institute for Educational Assessment (IAVE)

Caption: A – Achieved; SB - Succeeded, but...; HD - Had difficulties;
CD/DA - Couldn't do it or didn't answer

Table 2

Refining the prompt to build the didactic material

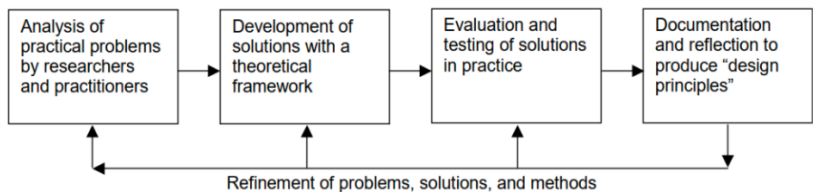
Prompts	Answers
i) Suggest topics for a text on “What is school?” for pupils aged 10.	Introduction: What is school? Why is it important to go to school? History of school: How did schools begin? What were schools like in the past? What we learn at school: What subjects do we study? Why is it important to learn these subjects? Teachers and classmates: What is the role of teachers? Why is it good to have classmates at school? Extracurricular activities: What are extracurricular activities? Why should we take part in them? My experience at school: What do I like most about school? What have I learned at school this year? Conclusion: Why is school a special place? What do I hope to learn at school in the future?
ii) List only topics for a text on ‘What is school?’ for 10-year-old pupils.	Definition of school; Importance of school; What we learn at school; Teachers and classmates; Activities at school; My experience at school.

iii) List only topics for a descriptive text on ‘What is school?’ for 10-year-old pupils.	Location and appearance of the school; Classrooms and common areas; School materials used; Daily routine at school; Favourite moments at school; How I feel at school
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Table 3
Summary of the implemented sequence

Lesson	Topic	Description of the activity
Lesson 1	What is school?	- Planning a descriptive text using the Magic School platform. - Text produced independently. - Revision of the text using the Magic School platform.
Lesson 2		- Finalising work from the previous lesson. - Requesting tasks from the Magic School platform to improve the students’ written texts. - These tasks were carried out independently outside the classroom and the students were told to complete them at a later date.

Figure 1
DBR Diagram



Resource: Peterson e Herrington, 2005, p. 4, as cited in Reeves, 2006, p. 26

Figure 2
First didact materials

Finalidade:

1. Organize os tópicos que escreveu e a informação que gostou de incluir em cada um deles, no quadro abaixo

6. _____

Elementos gerais dos tópicos escritos	1.
Elementos específicos dos tópicos escritos	2.

2. Lembre-se:

Português 5.ºB

Nome: _____ Data: ____/____/____

Seja as seguintes instruções:

1. No seu computador, abra o navegador de internet e escreva "Magic School".

2. Entra no primeiro link que te aparecer e clica em "Log in".

3. No e-mail escreve magia.school@es e na password magia.school.

4. Vai ao "Banco (chatbot)".

a. Escreve a pergunta: Indica, unicamente tópicos, para um texto sobre "O que é a escola", para alunos com 10 anos. E escolhe um dos tópicos propostos;

b. Escreve a pergunta: Indica, unicamente tópicos, para um texto descritivo sobre "O que é a escola", para alunos com 10 anos. E escolhe, nesta uma vez, um dos tópicos propostos.

Verifica	Sim	Não
Organize o meu texto em parágrafos.		
Utilizei adequadamente a estrutura do texto descritivo – introdução, desenvolvimento e conclusão.		
Escolhi um título certo e adequado.		
Descrevi corretamente os espaços, as pessoas, os objetos, etc.		
Utilizei diversos nomes e adjetivos.		
Utilizei as formas verbais adequadas – pretérito imperfeito ou presente do indicativo.		
Utilizei recursos expressivos – enumeração, personificação, metáfora.		
Recorri a diferentes palavras e expressões que indicam a localização no espaço – aqui, em cima, do lado, mais ao longe, por último.		
Fiz referências a sensações – visão, audição, paladar, olfato e tato.		
Procurei substituir palavras e expressões repetidas.		
Prestei atenção à pontuação.		
Prestei atenção aos acentos ortográficos.		

Após preencher a lista de verificação:

1. Copia o teu texto para o **Banco (chatbot)** e, depois, escreve a pergunta: "Este texto está escrito de acordo com as características do texto descritivo?". **Banco (chatbot)**

2. Depois de obtiver a resposta à questão, pergunta "Como poderia melhorá-lo?".

3. Percorrendo as sugestões que a plataforma Magic School te deu? _____, lê o quadro seguinte e escreve o que não percebeste.

4. Concordas com as sugestões que a plataforma Magic School te deu? Sim Parcece Es
capaz de pensar nas razões?

5. Melhores o teu texto, utilizando as sugestões dadas pela plataforma Magic School.

6. Vê a tabela de verificação e certifica-te de que conseguiste melhorar os aspetos que tabeis em falta.

Tradução: O que é a escola?

Apaga que já planeastes a informação que queres incluir no teu texto, redige-o, no máximo, em 10 parágrafos. Se preferires podes escolher entre dois:

Figure 3

Example 1- Planning almost like writing

Planificação:

1. Organiza os tópicos que escolheste e a informação que gostares de incluir em cada um deles, no quadro abaixo.

a. Como a escola nos prepara para o futuro?

b. Alimentação na Escola

Elementos gerais dos tópicos escolhidos	a. A escola ensina-nos, para termos um bom futuro b.
Elementos específicos dos tópicos escolhidos	a. Além da aprendizagem ensinam-nos a comparar e avaliar b. A alimentação nas escolas, baseiam-se na alimentação saudável

estar do aluno.

Figure 4

Example 2- Writing almost the same as planning

Textualização: O que é a escola?

Agora que já planificaste a informação que queres incluir no teu texto, redige-o, no máximo, em 80 palavras. Se preferires podes escolher outro título.

O bem-estar

"Eu" muito gente que pergunta "O que é a escola?" por isso, vamos tirar essa dúvida hoje.

Como é que a escola nos prepara para o futuro? A escola ensina-nos, para termos um bom futuro, mas além da aprendizagem, ensinam-nos a comparar e a avaliar.

Como é a alimentação na escola? A alimentação é essencial para o bem estar do aluno, por isso, as escolas baseiam-se na alimentação saudável.

Em resumo, a escola é um lugar bom que nos ajuda. Esperamos que isto tenha ajudado

Figure 5
Well-executed planning and resulting text

Planificação:

1. Organiza os tópicos que escolheste e a informação que gostares de incluir em cada um deles, no quadro abaixo.

a. 3 Os professores e funcionários na escola
b. 2 A importância da escola

A Elementos gerais dos tópicos escolhidos	a. Os professores e os funcionários da escola ajudam-nos <u>ajudam-nos muito</u> b. A escola é importante para os alunos aprenderem
B Elementos específicos dos tópicos escolhidos	a. Não só nos ensinam matéria como nos ensinam a viverem sociedade b. A escola é importante

Escola

A escola é uma instituição onde os professores dão aulas aos alunos, aprendem o que o professor ensina. Os funcionários ajudam-nos a ter bons comportamentos, e não só ensinam-nos um pouco mais e vão com nós ajudar a crescer em sociedade.

Quando aprendemos ficamos mais inteligentes e mais preparados para um dia ter sucesso na vida.

Adoro a escola!

Figure 6
‘Magic School Suggestions’ regarding the first question with seven options

Indica, unicamente descritos, para um texto descritivo sobre "O que é a escola?", para alunos com 10 anos

Tópicos para um Texto Descritivo sobre "O que é a escola?" para alunos de 10 anos:

1. Introdução à Escola
2. A Importância da Escola
3. O Papel dos Professores
4. As Salas de Aula e os Colegas
5. As Atividades e Recreios
6. O Que Podemos Aprender na Escola
7. Conclusão: Por que a Escola é Importante

Figure 7

Magic School Suggestions' regarding the 1st question with ten options

Indica, unicamente descritos, para um texto descritivo sobre "O que é a escola?", para alunos de 10 anos.

Tópicos para um Texto Descritivo sobre "O que é a escola?" para alunos de 10 anos:

1. O que é uma escola?
2. Quem trabalha na escola?
3. O que fazemos na escola?
4. Por que é importante frequentar a escola?
5. As diferentes áreas de estudo na escola
6. Atividades extracurriculares
7. Como a escola nos ajuda a aprender e crescer
8. A importância da amizade na escola
9. O que podemos fazer para aproveitar ao máximo a escola?
10. Como a escola nos prepara para o futuro?

Figure 8

Magic School's response about the characteristics of descriptive text

A escola é uma instituição onde os professores dão aulas aos alunos, e os alunos aprendem o que o professor ensina. Os funcionários nos ajudam a ter bons comportamentos, e não só nos alegram um pouco o nosso dia como nos ajudam a conviver em sociedade.

Este texto está escrito de acordo com as características do texto descritivo

Sim, o texto fornecido está escrito de acordo com as características de um texto descritivo. Ele descreve de forma sucinta e clara a função da escola como uma instituição educacional, onde os professores ministram aulas e os alunos aprendem com eles. Também destaca o papel dos funcionários em auxiliar os alunos para terem bons comportamentos e conviverem em sociedade. A descrição dos elementos da escola e suas funções se enquadram no estilo de um texto descritivo.

Figure 9

Magic School's suggestions to improve the text

Como poderia melhorar

Para melhorar o texto e torná-lo mais descritivo e envolvente, você pode adicionar detalhes específicos que ajudam a pintar uma imagem mais vívida da escola na mente dos leitores. Aqui estão algumas sugestões:

- Incluir exemplos concretos de atividades educacionais que os alunos realizam em sala de aula.
- Descrever de forma mais detalhada as interações entre professores e alunos durante o processo de aprendizagem.
- Adicione informações sobre os espaços físicos da escola, como a sala de aula, a biblioteca, o pátio, entre outros.
- Explorar como os funcionários auxiliam os alunos na construção de bons comportamentos e no desenvolvimento de habilidades sociais.
- Utilizar linguagem descritiva para transmitir sensações, emoções e experiências vivenciadas na escola.

Ao incorporar essas sugestões, o texto se tornará mais rico em detalhes e mais atrativo para os leitores, proporcionando uma experiência de leitura mais envolvente e informativa sobre o ambiente escolar.

Figure 10

Most common errors

A escola é um edifício, que pode ser grande, alto, mas esta escola não é assim, tem 5 blocos, grandes e coloridos. Em todos aprendendo e convivendo. Na entrada há uma placa com o nome da escola. É uma escola que vem é resistente. O recreio é grande e cheio de árvores, flores e ervas por todo o lado. Na escola há muitas pessoas de várias idades, muitos professores e quase todos amigos. Quais os erros que ocorrem mais vezes neste texto descritivo?

Para identificar os erros mais frequentes neste texto descritivo, podemos destacar os seguintes pontos:

1. Falta de classificação adequada, como vírgulas e pontos finais, para separar as ideias e facilitar a leitura.
2. Uso inadequado de espaços antes e depois das vírgulas.
3. Palavras sem acentuação gráfica correta, como "escola" em vez de "escola".
4. Falta de concordância verbal, como "tem 5 blocos" em vez de "tem 5 blocos".
5. Uso de expressões redundantes, como "muitos professores e quase todos amigos".

Figure 11
Tasks to improve the errors mentioned

Que tarefas posso realizar para melhorar um texto descritivo?

Melhorando um Texto Descritivo

Para aprimorar um texto descritivo, você pode considerar as seguintes tarefas:

- 1. Rever a Estrutura:**
 - Verifique se o texto possui uma introdução clara, um desenvolvimento organizado e uma conclusão consistente.
- 2. Adicionar Detalhes Descritivos:**
 - Utilize adjetivos, advérbios e metáforas para enriquecer a descrição e tornar o texto mais vívido.
- 3. Utilização dos Cinco Sentidos:**
 - Inclui detalhes sensoriais para envolver o leitor, descrevendo o que pode ser visto, ouvido, cheirado, tocado e saboreado.
- 4. Revisar e editar:**
 - Faça uma revisão cuidadosa para corrigir erros gramaticais, melhorar a fluidez e garantir que a descrição seja clara e concisa.
- 5. Solicitar feedback:**
 - Peça a colegas, amigos ou alunos para ler o texto e fornecer feedback construtivo.
- 6. Revisar a Estrutura de Frases:**
 - Varie o comprimento e a estrutura das frases para manter o interesse do leitor.

Lembre-se de que a prática constante e a busca por feedback são essenciais para aprimorar suas habilidades de escrita descritiva.

Figure 12
Text correction

A escola é uma enstituição onde os professores dão aulas aos alunos, e os alunos aprendem o que o professor ensina. Os funcionários ajudam-nos a ter bons comportamentos, e não só nos alegram um pouco o nosso dia como nos ajudam a conviver em sociedade. Quando aprendemos ficamos mais inteligentes e mais preparados para m dia ter sucesso na vida. Adoro a escola!
 Corrige o texto

A escola é uma instituição onde os professores ministram aulas aos alunos, e estes aprendem o que os professores ensinam. Os funcionários auxiliam-nos a ter bons comportamentos e não só nos alegram um pouco o dia, como também nos ajudam a conviver em sociedade. Quando aprendemos, tornamo-nos mais inteligentes e melhor preparados para alcançar o sucesso na vida. Adoro a escola!

Figure 13
Justification of the correction

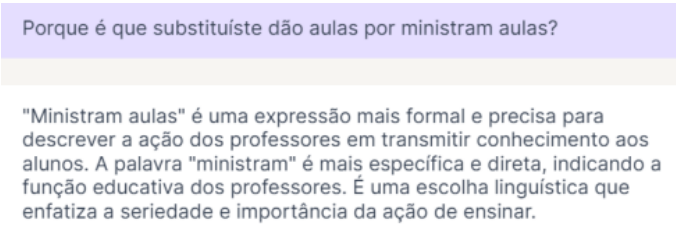


Figure 14
Do you think that using technology in the classroom made you more motivated for the proposed lesson? Why?

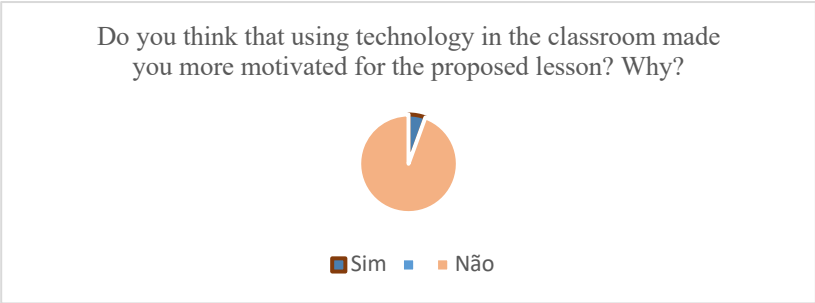


Figure 15
Did the Magic School platform help you plan and revise your text? Why?

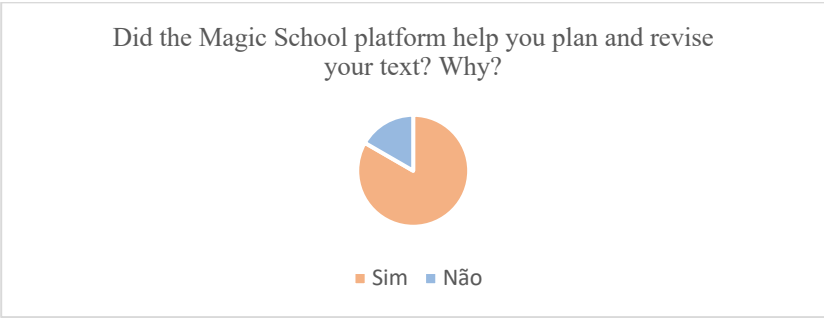


Figure 16

Did you find it difficult to use the Magic School platform?

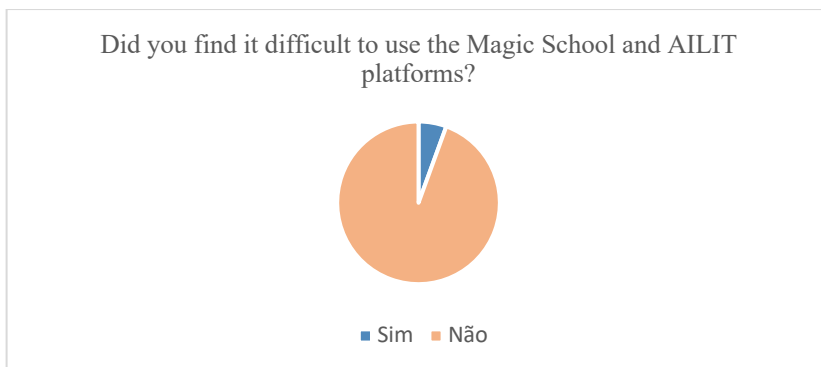
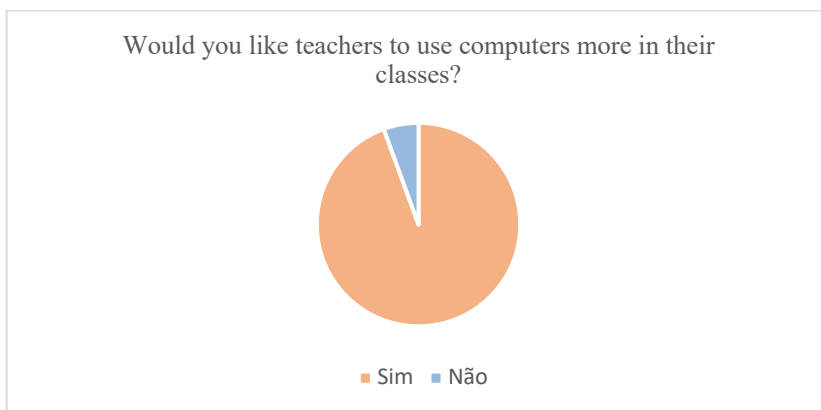


Figure 17

Would you like teachers to use computers more in their classes?



Acknowledging the use of AI

We acknowledge the use of ChatGPT to translate the text into English, version 4.0 <https://openai.com/pt-BR/>. We acknowledge the use of Magic School <https://app.magicschool.ai/raina?thread=21040932> to create the teaching materials. The prompts used include: “Indicate topics for a text on ‘What is school?’ for 10-year-olds.”; “Indicate topics only for a text on ‘What is school?’ for 10-year-olds”; “Indicate topics only for a descriptive text on ‘What is school?’ for 10-year-olds”.

PERSPECTIVES ON THE FORMATIVE VALUE OF CHARACTER DEVELOPMENT CURRICULUM: A QUALITATIVE RESEARCH IN ADVENTIST SCHOOLS IN WESTERN ROMANIA

Gabriel-Constantin Nicola¹

Abstract

The Adventist schools in western Romania use a customized curriculum aimed at developing students' character. The designed curriculum is structured to ensure continuity throughout an entire schooling cycle. The purpose of this study is to investigate how the content of optional subjects focused on character development, taught in Adventist schools in western Romania, can positively influence the formation of students' character traits. The present study is qualitative research that employs the focus group method and content analysis to explore subjective aspects regarding the attitudes and motivations of students attending Adventist institutions, in relation to the character values they learn in school. The results of the qualitative research highlight differences in character attitudes between students in schools where subjects focused on character development are taught and those in schools where they are not. In conclusion, what seems to positively influence students' character-related attitudes is the content of the custom curriculum focused on character development.

Keywords

Character traits, students, character development curriculum

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INTRODUCTION

In Romania, there is a nationwide evaluation of students every two years in primary and middle schools: in the second, fourth, sixth, and eighth grade. In 2023, in an internal study, focused on content analysis, the results of which have not been published, we compared the responses of students from an Adventist school with those from students from a public school and we discovered the following reality: In the 2nd grade assessment, in Romanian language and literature, one of the items asked students to express what they appreciated most about the main character in the text (Giraffe). Comparing the responses of students from an Adventist School (Speranța Primary Adventist School), with those of students from a class in a public school in the same locality, Macea, Arad County, Pavel Covaci Secondary Public School, I discovered that the Adventist school students rated the main character (Giraffe) highlighting Kindness and Modesty, while public school students highlighted Intelligence and Creativity.

This observation led me to begin research, so that from January to March, 2025, I started qualitative research in Adventist Schools from Western Romania. In Western Romania, there are two Adventist schools, one located in the rural area, in the town of Macea, and one in the city of Arad, both in Arad County. These schools use a public curriculum, with teachers aiming to cover the content from a Christian perspective. However, as a distinct, specific hour for character development, these schools have a single hour per week and also a 20-minute daily devotional moment. The curriculum for these hours aimed at character development is developed by teachers who teach in these Adventist schools and is approved by the Arad County School Inspectorate. They target 12 dimensions: Listening, Kindness,

Gentleness, Respect, Courage, Generosity, Diligence, Gratitude, Honesty, Attention, Patience, Sincerity.

The qualitative research aimed to capture important information through focus group interviews analyzing the opinions of parents and students regarding how the content of the curriculum decided by Adventist schools can contribute to the development of positive character traits of young school-age students. They belong to different groups depending on the environment in which the schools where they study are located (rural vs. urban, Adventist school vs. Public school).

The research is exploratory, interpretive in nature, and an exact quantification of the influence of curriculum content on the formation of positive character traits, as an exclusive result of the school's influence, is probably impossible to provide.

REVIEW OF LITERATURE

The literature is rather sparse when it comes to studies that evaluate from a sociological perspective the impact of an Adventist curriculum on character formation, expressed in terms of character traits and character attitudes.

Next, are a few theories that support the importance of curriculum in character development. They argue that school is not only a place for transmitting knowledge, but also an essential space for the moral, socio-emotional formation of students. According to Lawrence Kohlberg, moral development is grouped into stages, and in the school stage, the school can stimulate this development through morally relevant experiences and through the curriculum (Kohlberg, 1964). A curriculum that includes moral dilemmas, civics, and ethics helps students form moral values and principles.

Another theory is the one developed by Thomas Lickona (1991), according to which formal education should include the formation of character, not just the intellect. Lickona (1991), one of the leading experts in studying the issue of character development, defines character education as “the intentional effort to cultivate in students virtues essential for personal and civic life, such as respect, responsibility, honesty, and compassion” (p. 74), emphasizing the importance of a curriculum that integrates moral values explicitly, systematically, and consistently, which can then be implemented in an integrated manner, in a flexible educational process. This means that the school becomes a place of “character formation,” not just the transmission of information (Lickona, 1991).

In John Dewey's vision, education should aim at the complete development of the individual - intellectual, emotional and moral (Dewey, 2013). Dewey promotes the idea of a curriculum based on experience and reflection. Education should be active and student-centered, and the curriculum should reflect real-life problems that contribute to the development of social responsibility. The character development is the result of authentic participation in the educational process (Pietig, 1977).

Educational curriculum that aims to develop character and cultivate positive character traits in students has been the subject of significant studies and educational initiatives in recent decades (Arthur et al., 2017; Berkowitz & Bier, 2005; Lickona, 1992; Nucci et al., 2014).

A systematic review of studies in low- and middle-income countries by Jeffery-Schwikkard et al. (2025) found that educational interventions focused on character development had significant effects on emotional health, improved students' sense of responsibility, perseverance and self-regulation skills (White et al., 2017). They also found

improvements in leadership skills and overall moral behavior among students participating in the study. Similarly, curricula focused on social and emotional learning, in relation to character development (SEL), have shown that students who participate in such initiatives develop more empathy, reduce conflict and aggressive behavior, and achieve better academic performance (Uşaklı, 2021). For example, the implementation of such a “Happiness” curriculum in schools in Delhi (Kim et al., 2019) led to an increase in the degree of social engagement of students, a better relationship with teachers and, implicitly, better school performance.

Other educational models include: Fettes Prep, which has integrated kindness as an essential character trait into its curriculum, emphasizing the development of empathy through lessons about diverse perspectives and experiences. The initiative has led to significant improvements in student relationships and a more positive atmosphere in school. Living Values Education (LVE): This educational approach promotes the development of value-based learning communities and places the search for meaning and purpose at the center of education, being implemented in approximately 40 countries and includes practical group activities, workshops, and online courses for children, educators, youth, and parents (Komalasari & Saripudin, 2018).

The curriculum can be an essential vector for character education (Character.org., 2020), first of all through the content of the subjects and the integration of moral values in subjects such as literature, history, social sciences, etc. To these are added extracurricular/extracurricular activities, including various projects, volunteer programs, community activities, etc. Last but not least, we consider the existence of a hidden curriculum, here referring to the behavioral models of teachers, the implicit norms of the school,

together with the atmosphere and moral-Christian framework that contribute to character formation (Fisher, 2022; White, 2022). Such perspectives highlight the relationship between character formation and academic performance, since, when young people are trained to be responsible, this will increase their interest in learning, being motivated “to aim ever higher, towards the highest level of development of their intellectual capacities” (White, 1968, p. 310).

One of the flaws of character-oriented curricula is that it is difficult to integrate values into content, methods, and school culture, requiring coherence, ongoing teacher training, and institutional support (Davis, 2003). In addition, the implementation of these programs can be difficult due to the lack of standardized guidelines and the difficulty of measuring their effectiveness. Evaluating the impact of character development is more complex than in traditional academic disciplines, and measurement tools can be less precise. Although many character education programs have demonstrated positive effects (Lapsley & Narvaez, 2006), there are also studies that suggest that some interventions have not had a significant impact on student behavior or academic performance (Dishon & Goodman, 2017).

Curricula that aim to develop character and cultivate positive traits in students can have a significant impact on their behavior, relationships and academic performance, but it is essential that these initiatives are adapted to the specific context of each school and supported by the entire educational community.

Character formation has become an increasingly frequent topic of interest in recent years, whether we refer to public or private educational institutions, or to mass educational systems that use a public curriculum or educational alternatives. Against the backdrop of an ever-expanding digitalization and increasingly easy access to information, it

seems that today's society is more interested than ever in a broader and more multifaceted development of the students (Carabet, 2020; Radu, 2018), aiming for the integral development of students, not only from a cognitive point of view, but also in terms of physical, socio-emotional and spiritual development (Toma, 2019).

The school curriculum plays an essential role in shaping students' values, attitudes and character traits, through content, methods and learning environments favorable to character development, throughout the entire educational process carried out in the teaching-learning-evaluation triad (Fisher, 2022; Petre, 2020).

The curriculum of Adventist schools is based on the principles of the Bible, reflecting the philosophy of Adventist education, which was summarized by Ellen G. White (1903) as follows: “Every student should excel in faith, learning, and service, combining biblical truth with academic achievement for the honor of God and the blessing of others” (p. 2).

Thus, by analyzing the specialized literature, a theoretical model is outlined, in which we can capture the independent variable that interests us in particular, the curriculum, respectively the independent variable, the relational-value side of personality, character. However, specialized studies highlight numerous other proxy variables that influence the formation of character traits and character attitudes of students.

METHODOLOGY

The purpose of research

The present study represents exploratory research on the role and significance that parents and students in Adventist

schools in western Romania attribute to the content of the curriculum, taking into account perceptions of how the curriculum that aims to develop character contributes to the formation of positive character values in children.

The purpose of this qualitative research is to investigate how the content of optional subjects focused on character development, taught in Adventist schools in western Romania, can positively influence the formation of students' character values.

The research objectives were:

1. Understanding the relationship between the content of the curriculum that aims to develop character and the character attitudes of students, seen through the eyes of students' parents; (The character attitudes are constant and relatively stable manifestations of a person's character in relation to certain values, situations, people or social norms. They reflect the way someone relates affectively, cognitively and behaviorally to various aspects of life, based on already formed character traits).
2. Highlighting the existing differences

Based on the focus group interviews conducted, through the narrative perspectives offered by parents and students, we tried to capture their opinions on the following dimensions: the perception of the influence of the content of optional programs, which aim to develop character, the character values to which teachers should give more space when designing the curriculum.

Data collection

Data collection for this study was carried out between January and March 2025. Using qualitative research methodology presented a great advantage, namely that of being

carried out in the field, in a natural context (Ritchie et al., 2013), contextual aspects being essential in discovering answers to various problems (Akyildiz & Ahmed, 2021).

As a method of collecting qualitative data, focus groups have the advantage of providing information and images from the actor's perspective, regarding behaviors, attitudes, motives, opinions, using group dynamics (Krueger & Casey, 2005). During the research and use of focus group interviews, we have observed some advantages of this method, among which we can list the following: they have provided us with detailed answers, encompassing a diversity of opinions, both from students and parents, and, in addition, they have offered freedom to different perspectives, allowing us to introduce new ideas in consolidating previous comments and conclusions.

The advantage of avoiding the atomistic fallacy, that is, “deducing the collective state of mind from the statistical aggregation - no matter how refined it may be - of individual opinions” (Rotariu & Iluț, 1997, p. 64). The second advantage was the openness of the participants during free interactions, in the discussion process, in the group dynamics, given the small number of members within the group (Denny & Weckesser, 2022; Krueger, 2014).

Participants

We organized four focus groups, comprising a total of 48 students in grades 2 and 3, aged between 7 and 9. The groups were selected according to three theoretical criteria. Of the four focus groups, two are from rural areas and two from urban areas.

The second criterion was the type of school, so that, in both rural and urban areas, half of the students are from Adventist schools and half are in public schools. Another

criterion used was gender, with each group comprising half boys and half girls.

In Table 1 we present the distribution of participating students, depending on the type of school, gender and the environment in which the school is located.

Table 1
Participating students, by gender, type and school environment

SCHOOL	Environment	Masculin	Feminin	Tot. students
SPERANȚA (SDA)	Rural	6	6	12
PAVEL COVACI (Non SDA)	Rural	6	6	12
JOHN HUNERGARDT (SDA)	Urban	6	6	12
ION CREANGĂ (Non SDA)	Urban	6	6	12

When forming groups of 12 students (6 girls and 6 boys), the participants were randomly selected by the class teachers, the first three in the catalog from the 2nd grade and the last three from the 3rd grade, respectively the first three girls in the catalog from the 2nd grade and the last three from the 3rd grade catalog. The criterion of religious affiliation was not relevant in the selection stage.

Through the leadership of the schools and the teachers, we also obtained the written consent of the students' parents, in order to participate in the study. We also organized two focus groups, comprising a total of 16 parents, only from Adventist schools, parents of 2nd and 3rd grade students.

Table 2*Participating parents, by gender and school environment*

SCHOOL	Environment	Masculin	Feminin	Tot. parents
SPERANȚA (SDA)	Rural	4	4	8
JOHN HUNERGARDT (SDA)	Urban	4	4	8

When forming groups of 8 parents, the participants were randomly selected, the father of the second and third student in the catalog from the second grade, respectively the third grade, and in the case of selecting female parents, we used the entire numerical ordinal criterion (the mother of the fourth and fifth student in the catalog from both grades), both in rural and urban areas. As in the case of students, the criterion of religious affiliation was not relevant in the selection stage of parents. The researcher personally organized and moderated the four focus groups with students and the two focus groups with parents.

Instrument and procedure

Both interview guides included an ice-breaking exercise in the introduction, followed by 8 questions (interview guide for the focus group with students) and 7 questions (interview guide for the focus group with parents). In developing the content of the interview with students, we considered the following areas: attitudes, values and perceptions of students, which would highlight the role of the curriculum in character development, as well as the frequency with which teachers address certain character traits. In developing the content of the interview with parents, we considered the following areas: values, perceptions and influence, which would highlight the perception of parents regarding the value of the curriculum content in the

development of character traits, as well as the relationship between positive character traits and school results.

During the conduct of both focus group categories, we considered that, in our approach, we reached saturation (the moment when we had already heard the range of existing opinions, without receiving any new information) at the time of conducting the fourth interview with the students, respectively the second interview with the parents.

The introductory part of the focus group preparation activities generated a favorable framework, which facilitated open communication between the participants. "A buffet with various products made available to the participants (for example, sweets and juices) is a detail of surprising importance" (Carey, 1994, p. 230). Although, from the perspective of other authors (Patton, 2002), the practice of offering small protocol treats to be consumed can be seen as raising an ethical issue, the general impression was that the parents were more open to intervening during the interview, to share their opinions and experiences in the rural school, where we offered some sweets to taste and a drink.

With the consent of the parents of the students involved, we audio-recorded the activities carried out with both the students and the parents. The contents of the recordings and the notes made during the focus group interviews were transcribed in detail, then these transcriptions were coded and interpreted using the qualitative analysis program NVIVO 11, with the help of which we were able to systematize and analyze the data, then we compared the frequency or distribution of references, the degree of coverage and the coherence of references within a focus group or between groups. Depending on the topics of interest, with the help of this software, we found out the perspective of each member participating in the interview, but also differences

between participants or between groups of students or parents, regarding the way they relate to the topics addressed.

Data analysis

To interpret the results, we used thematic analysis, going through the following steps: familiarization with the data, generation of codes and subcodes, identification of main themes, definition of themes, presentation of results (Akyildiz & Ahmed, 2021; Sbaraini et al., 2011).

Although the thematic analysis research method has been used intuitively and empirically before, Braun and Clarke (2006) are the ones who first systematized and clearly defined thematic analysis as a method in its own right, detailing its steps and theoretical justifications. Thematic analysis is “a method for identifying, analyzing, and reporting patterns (themes) within data” (p. 79).

We transcribed everything the participants said during the four interviews with students and the two interviews with parents. This step helped us to better understand the data, during the transcription. We saved the transcriptions of the six focus groups conducted in the NVIVO 11 software, and in this coding step we entered the participants' responses (students and parents, separately) grouping them by thematic dimensions and subdimensions (using codes and subcodes). We preferred to carry out open coding, *in vivo*, starting from key words and expressions, but, nevertheless, we also extracted significant semantic structures to which we gave a first meaning, before comparing them with other similar structures. The comparison continued between discursive sequences, allowing the enrichment of the model and its nuance.

The results that we obtained through the data analysis tools introduced in the NVIVO 11 program contain: word

clouds (these illustrate the frequency of words at the focus group level or only for certain dimensions) and mind maps.

In order to obtain the most accurate visualizations, we eliminated from the analysis connecting words, such as: “but”, “if”, “for”, “and”, “nor”, “to”, etc. the so-called stopwords. We used italics for the quotes of the interview participants, to highlight the theoretical propositions that we formulated, following the analysis and interpretation of the data. Thus, using an inductive method (Braun et al., 2019), in our research we aimed to identify the main concepts associated with the themes addressed in the interview guide.

Based on the data analysis and their interpretation, we developed the following dimensions within the focus groups with students: (1) *Attitudes* - refers to character attitudes that students manifest in concrete life situations; (2) *Values* - refers to the character values that they consider the most important; (3) *Perceptions* - refers to how they perceive the role of the curriculum in character development, as well as the frequency with which teachers address certain character traits during the school program. Within the focus groups with parents, we developed the following dimensions: ; (1) *Values* - refers to the character values that they consider the most important; (2) *Perceptions* - refers to how they perceive the role of the curriculum in character development, as well as the frequency with which teachers should address certain character traits during the school program; (3) *Influence*, which highlights parents' perceptions of the value of curriculum content in developing character traits, as well as the relationship between character and academic achievement. In both categories of interviews, all dimensions contain several derived subdimensions.

Using several successive stages of coding the transcripts, we included relevant aspects in as many dimensions and subdimensions as possible in order to outline an overall picture that encompasses all the themes.

RESULTS

Running the frequency of words expressing character values, the three most frequent words in the focus groups with students from the Adventist school (rural area) were those related to *kindness, sincerity, respect*, and at the Adventist school (urban area): *sincerity, kindness, respect*.

Figure 1
The most common concepts- SDA Rural

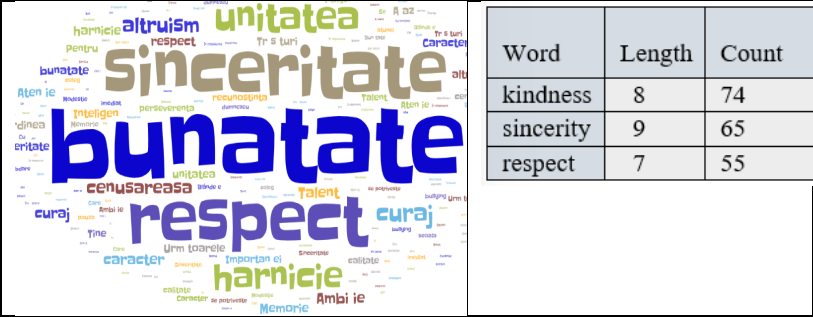
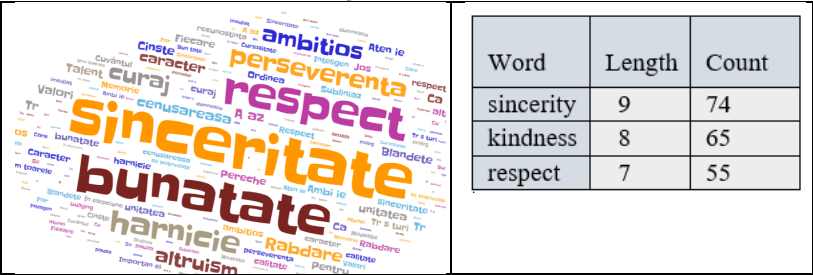


Figure 2
The most common concepts- SDA Urban

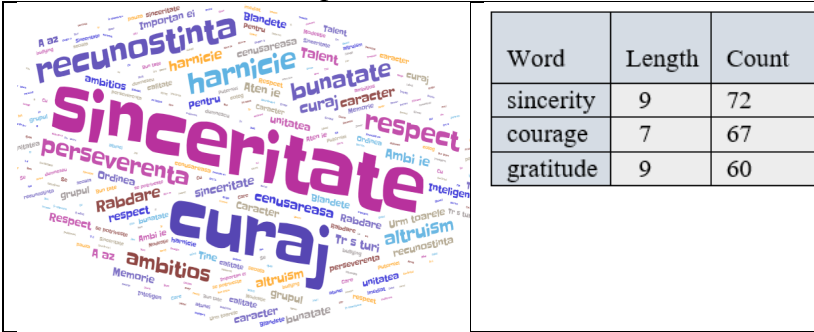


Within the first thematic dimension (“Attitudes”) we included the following subdimensions:

1. *Own and colleagues’ behaviors* - refers to the way they behave (act and react) in concrete exemplified contexts;
2. *Profile* - referring to what they appreciate most about certain characters encountered in literary texts;
3. *Choice* - refers to the way they choose their friends, based on certain character traits.

The responses to the item regarding characters in literary texts highlight the choice of the same character values that students considered to be most important in relation to their colleagues. This aspect was noted both in the rural and urban areas. In the public rural school, the most appreciated values by students are: *sincerity, courage, gratitude*, and in the public urban school *sincerity, intelligence, courage*.

Figure 3
The most common concepts - Public Rural

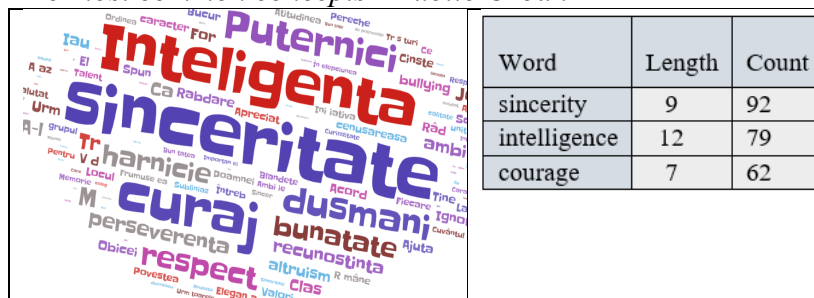


For one item, students had a list of sets of words which contained both character traits and skills/abilities. It is interesting to note that most of the urban public-school students chose intelligence, which is a capacity (Piaget, 2005), or “the result of the process of acquiring, storing in

memory, retrieving, combining, comparing, and using in new contexts information and conceptual abilities” (Humphreys, 1979, p. 106). It is possible that the intelligence is highly valued by them and their parents.

Figure 4

The most common concepts - Public Urban



One of the subdimensions created within the second dimension (“Perceptions”), more precisely “Values addressed by teachers”, caught our attention, where students reported on the character traits most addressed during curriculum lessons for character development by teachers.

Students also reported on concepts addressed during curriculum lessons for character development, but also on time during breaks or other extracurricular/extracurricular contexts.

“I believe that if the teacher is good, we will be good too,” said a student (F.V., girl, Adventist School, Rural, 8 yo). This statement highlights the value of the power of the teacher’s example.

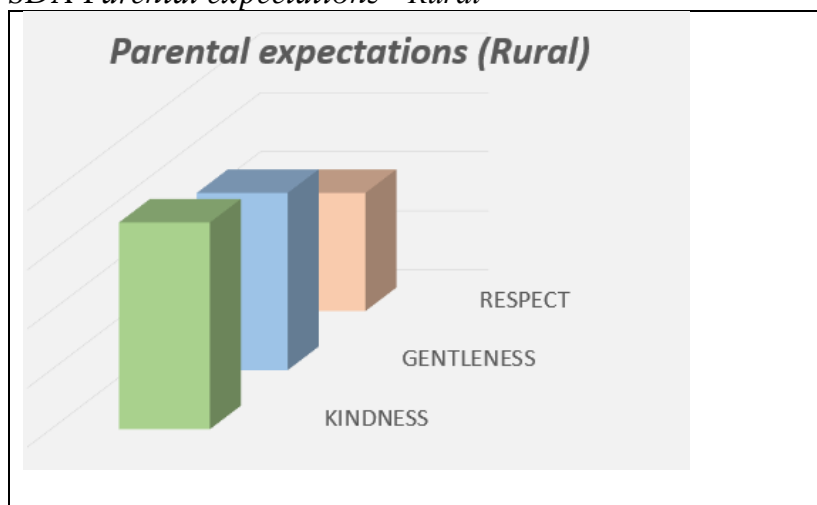
Analyzing the resulting mental map for the word “Character”, for students in schools where character development is taught, in the subdimension “Values addressed by teachers”, it resulted that teachers allocate different time, from case to case, for each of the nine-character traits taught, at

the level of second and third grades (grades included in the present research).

Analyzing the differences between parents, depending on the environment, the results show that the expectations of rural parents are that teachers should devote more time in the educational process to the following values: kindness, gentleness, respect.

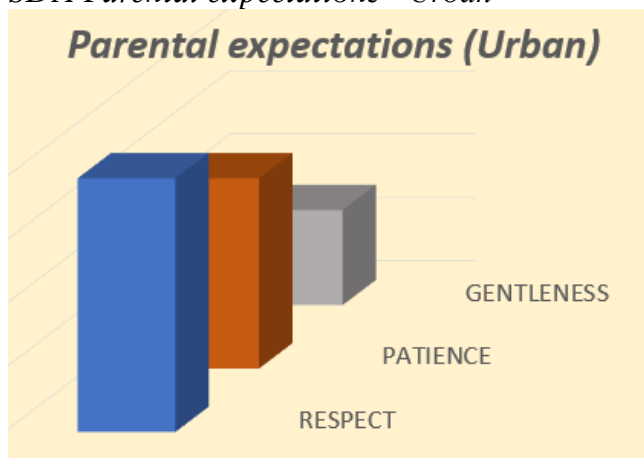
Figure 5

SDA Parental expectations - Rural



On the other hand, parents of students from urban areas believe that teachers should address the values: respect, patience, gentleness more often in the educational process.

Figure 6
SDA Parental expectations - Urban



One parent said „*I believe that character formation depends more on the first 7 years*” (A.D., parent, Urban, SDA School). Also, analyzing the data of this qualitative research, we can observe that in the Adventist school in the rural area there is a higher degree of parental trust in the school. „*The most sacred element is the teacher. He can teach any content in a Christian manner, if he is a believer*” (Ş.I., parent, Rural, SDA School). At the same time, in the urban Adventist school, we observed a lower level of trust of parents regarding the role that the curriculum can play in character formation, that's because „*One hour per week is not enough for character development...*” (S.V., parent, Urban, SDA School).

One explanation could be that the rural Adventist school is in its 15th year of operation, while the urban Adventist school is in its 4th year of operation. Another possible explanation: urban parents have higher expectations, probably associated with their higher level of education.

DISCUSSIONS AND LIMITATIONS

The four focus groups with students and the two focus groups with parents report the experiences, opinions, and significance that students from Adventist schools in western Romania and their parents attribute to the content of the curriculum, taking into account perceptions of how the curriculum aimed at character development contributes to the formation of positive character traits in children.

The answers that the interview participants provided can serve as guides for identifying aspects that require further research. During the focus groups, both with students and parents, the atmosphere was friendly and relaxing, and the content of the reports highlights this. There were situations in which students spoke about problems with relationships with some colleagues, about the fact that teachers rarely address certain topics about character development during classes that interest them, such as: courage, patience.

At the same time, during the interviews, especially in Adventist schools, I noticed an insecurity in some students, who were unsure whether to answer honestly, as they feel, or according to the desirability of the answer. An Adventist child asked me this question: “How should we respond, how should we be or how do we truly feel?” (B.E., boy, Adventist School, Urban, 9 yo).

Conducting the four focus groups with students, in a format with physical presence, right in the schools where the students study and during the course schedule, was an advantage, because the participants were in a familiar environment, which gave them security, which was reflected in their openness and willingness to share their opinions, experiences and perceptions on how the curriculum aimed at character development contributes to the formation of their positive character traits. We believe that the two interviews

conducted with parents helped us to draw a clearer and more complete picture. However, for a clearer understanding of the topic addressed, it is necessary that this qualitative research be complemented by quantitative research.

Although focus group interviews have a great advantage given that the small number of participants determines their openness during free interactions (Krueger, 2014), we believe that, in the present situation, in which the group members come from the same class, some of them could have felt the pressure of the group, and the content of the answers could have been influenced by the desire to conform to the group or by the desirability of the answers, and the expression of their own opinions could have suffered.

Another possible limitation of this qualitative study would be the existence of a single coder in the NVIVO 11 program, which could be slightly subjective in the coding process. The lack of double coding leads us to be cautious in making generally valid inferences.

In social science research and only when we perform content analysis, although we are attentive to how frequently certain things are said, we consider that those that are mentioned most often are also the most important. In general, this is one of the limitations of qualitative research, using the focus group interview method (Denny & Weckesser, 2022). Sometimes, a comment of major importance may be made only once in a focus group (Akyildiz & Ahmed, 2021). This is what we found, in some places, in the case of our research.

Parents of students in Adventist schools, both those in urban and rural areas, highlighted the following aspect during the interviews: there are numerous other extracurricular/extracurricular contexts that the school creates and where the elements of character development can be transmitted, with teachers positively influencing students in this

sense, if they themselves live these values in their daily lives. This point of view is in line with what is also highlighted in the specialized literature. Philip Jackson (1980) develops the theory of the hidden curriculum, supporting the idea that values and character attitudes are not only transmitted through the official curriculum. This includes unwritten rules, norms, expectations, teachers' attitudes, school climate, etc. In fact, through the hidden curriculum, students learn how to behave, cooperate, respect rules - so "they form their character, even if this aspect is not a formal one" (p. 160). On the other hand, parents perceive the curriculum not only as a tool for teaching knowledge, but also as an essential mean in shaping the character of students.

Through content, methods, activities and values promoted, it contributes to: moral development, the formation of ethical conduct, the construction of personal and social identity and, in general, preparation for life. This is in line with what authors such as Paolo Freire (2015) also highlight, according to which character development is linked to the ability to analyze, take a moral position, and actively contribute to society. A quality curriculum, which aims at character development, must form critical and active individuals in society, with high moral qualities. The parents of students in Adventist schools, who participated in the study, remain dissatisfied with the fact that there is little time allocated within the curriculum for character development.

The present study also highlights that the level of education of parents directly correlates with their expectations, because the expectations towards teachers and towards the school are higher for parents in urban areas than for parents in rural areas. This correlation would be worth testing in future research.

In a possible future direction of research, we believe that separate focus group interviews with teachers would be useful, in order to obtain their opinions as well. At the same time, the theme of the formative value of character development curriculum would be worth investigating in large-scale quantitative research, which could be extended, possibly, at a national level, to Adventist schools. Such research would help us to have a more complex overview of the relationship between the contents of the curriculum aimed at character development and the formation of character traits in young school-age students.

CONCLUSIONS

The added value of this qualitative research stems from the fact that the issue of the relationship between the content of the curriculum aimed at character development, in Adventist schools, but also in public schools, is studied through the direct involvement of students, and the exploration of the themes addressed is carried out from the inside, through the “eyes of children”. At the same time, the present study, although exploratory in nature, also manages to capture differences in opinions, perceptions and character attitudes, depending on the type of school (public or Adventist). Students from Adventist schools appreciated exclusively positive character traits in the characters, but also in their classmates, while students from public schools appreciated equally some abilities, such as intelligence or skill.

Thus, the results of the study highlight that students in Adventist schools have their own character-related system of reference, which contains several values, as character traits. One explanation may be that in their school program there is a distinct curriculum hour at the school's discretion,

which aims to develop character. However, it is difficult to quantify the share of influence resulting from this content of the taught curriculum, given that the character profile is the result of the interactions of several factors: education, family, environment.

The general impression that parents have is that there is a direct correlation between character and school results, one of the answers being: "...A child with a good character will become responsible and will have very good school results" (A.P., parent, Urban, SDA School).

What seems to positively influence students' character-related attitudes is the content of the custom curriculum focused on character development. We believe that the present research makes an important contribution in trying to better understand the relationship between curriculum content aimed at character development and the formation of character traits in young school-age students from Adventist private schools in western Romania, managing to highlight important social aspects regarding children's attitudes, beliefs and their opinions regarding the influence of the content of optional programs aimed at character development, the positive character traits most appreciated by them, as well as the character values to which teachers should give more space when designing the curriculum.

One of the conclusions of the parents who participated in the interviews is, in fact, a solution for Adventist schools and a long-term gain for students studying in these schools: increasing the number of specific hours aimed at character development

By conducting such qualitative research, the area of study of the impact of curriculum content aimed at character development of young school-age students, which has been relatively little explored in Romania, can be enriched. This area of research would deserve attention through

another extended study, at a national level, in which the importance of the curriculum for character development, as well as the relationship between the own scale of character attitudes and school results, would be investigated in more detail.

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CHALLENGES FACED BY FEMALE ENTREPRENEURS OF SMALL BUSINESSES IN A SMALL ISLAND STATE. A GROUNDED THEORY STUDY

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Rose Falzon³

Abstract

This paper aims to determine the challenges encountered by female owners of small businesses in a small island state. The primary objective of this grounded theory study is to identify and assess these challenges. The outcome of this study will contribute to implementing Sustainable Development Goals 2030, specifically relating to poverty and education, with a focus on female entrepreneurs. Grounded Theory is the methodological stance adopted by the researcher for this research study. Grounded Theory consists of a series of systematic and iterative steps for sampling, data collection and analysis, coding, creating a coding schema, memoing and reflexivity. This process leads to the construction of an initial conceptual model. This study was based on the participation of eighteen female entrepreneurs in a small island state. The researcher conducted in-depth, semi-structured interviews to elicit rich insights from the participants on the research area. The researcher conducted a

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four-stage coding process using the qualitative software MAXQDA. Constant comparison of data was implemented throughout the data analysis. Constructs were placed in a hierarchical structure using Corbin and Strauss's Conditional Matrix coding paradigm. Preliminary results show that challenges of female entrepreneurship may vary from business-related matters, and financial challenges, to personal and family-related issues. The personal characteristics of ambition, determination and perseverance are crucial for success. Exposure to business and enterprise education plays a crucial role in enabling entrepreneurs to enhance organizational performance. Knowledge of IT skills and eagerness to learn about accounting software programs, use of digital marketing and having an entrepreneurial mindset are effective contributors to success stories. The conclusions of this research study highlight the need for diverse educational programs and forms of support to overcome the challenges faced by female entrepreneurs in small businesses. Such educational programs include business and enterprise education, IT skills and digital marketing.

Keywords

Female entrepreneurship, small island state, Malta, grounded theory, challenges, educational programs, support

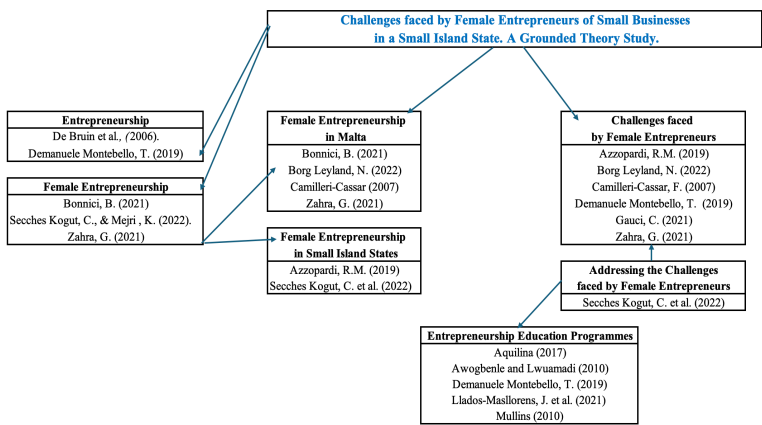
INTRODUCTION

The entrepreneurial environment in Malta, a small island nation, has undergone considerable change, with female entrepreneurs making significant contributions to economic development and innovation. This paper examines the challenges faced by female entrepreneurs within the European island context. The researcher's interest in this area of study stems from the fact that the researcher has been involved in education as a profession and in research for the past years. The area of specialization is accounting, financial literacy, business education and research. The researcher has been engaged in research in areas relating to addressing poverty in Malta through education, and is very keen on researching female entrepreneurship and female empowerment.

REVIEW OF LITERATURE

The researcher has conducted a literature review on the subject area. The researcher has prepared a literature map (see Figure 1).

Figure 1
Literature map



Entrepreneurship

Bonnici (2021) states that entrepreneurship is perceived as the driving force behind global economic growth, particularly in the European Union (EU). Over the past few years, the EU has increased its focus on entrepreneurship, encouraging more people to start their own businesses, with particular emphasis being placed on women.

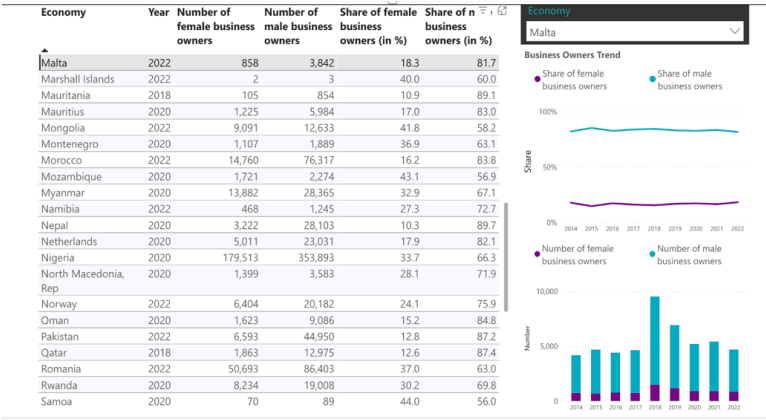
Female entrepreneurship in Malta

As stated by Camilleri-Cassar (2016), female entrepreneurship is still considered a limited phenomenon in European countries. The promotion of female entrepreneurship is a high priority on the EU policy agenda in the small island state of Malta. A variety of cultural, social, and economic factors

influence the landscape of female entrepreneurship. Research shows that despite growing acknowledgement of female roles in business, substantial obstacles remain. These impede the entrepreneurial efforts of females. These barriers include gender bias, insufficient access to financing, and limited networking opportunities. These are particularly pronounced by traditional gender roles and stereotypes which are prevalent in the Maltese society.

Despite various initiatives, the level of female entrepreneurship in Europe remains low, particularly in Malta. In Malta, there has been a growing effort to promote entrepreneurial activity among women. The insights gained from this study offer a deeper understanding of the potential constraints faced by women in Malta. The authors propose several policy recommendations, including cultural, market, and governance aspects, to encourage future research and policy development that promotes female entrepreneurship in Malta, a small island state (Camilleri-Cassar, 2007; Zahra, 2021).

Table 1
Statistical information from entrepreneurship



Source: Entrepreneurship Database, World Bank Website, 2025

Research on female entrepreneurship in Malta

According to the latest data available in the Entrepreneurship Database, accessed through the World Bank Group at the time of compiling this journal article, the most recent statistics on entrepreneurship in Malta pertain to the year 2022. Data indicates that the share of female business owners is quite low when compared to male owners. The share of female business owners is 18.3%, while that of male owners is 81.7%.

As part of the literature review, the researcher conducted a comparative study of research studies on female entrepreneurship in Malta, as conducted by Maltese researchers. Table 2 presents the primary challenges encountered by female entrepreneurs in Malta, as identified in the research studies of various scholars.

Table 2

Comparison of literature relating to the challenges faced by female entrepreneurs in Malta

Azzopardi & Lubis (2019)	Borg, N. (2022)	Camilleri-Cassar, F. (2007)	Gauci, C. (2020)	Zahra, G. (2021)
<i>In Malta & Indonesia</i>	<i>In the Financial Services Sector in Malta</i>	<i>In Malta</i>	<i>In Malta</i>	<i>In Malta</i>
Domestic responsibilities	Overregulation in the financial services sector	Managing family responsibilities	Patriarchal Maltese culture	Personal and family responsibilities
Work-life balance		Work-life balance	Work-life balance	
Difficulty to access financing	Financing requirements	Difficulty in securing: Capital funding	Discrimination by financial institutions	Difficulty in accessing credit

Time constraints for networking and training opportunities		Lack of networking opportunities	Lack of networking opportunities	Lack of support networks
	Lack of entrepreneurship education & training	The need for role models	Lack of entrepreneurial knowledge	Lack of entrepreneurship education
	Competitive environment			
	Establishing credibility & trust from customers & businesses			
	Attracting & retaining qualified staff			

Challenges faced by female entrepreneurs in Malta

Camilleri-Cassar (2007) indicates that a primary and continuing obstacle faced by women in innovation sectors appears to be the difficulty in securing capital funding for new business ventures, as well as when trying to secure economic support from financial institutions. Reference is made to the negative attitudes of banks and financial institutions towards female entrepreneurs, which threaten their confidence and credibility, and may lead to discrimination. This may result in women's businesses suffering disproportionately from being undercapitalized. A common complaint is the patronizing attitude of bankers towards prospective women entrepreneurs, particularly those with domestic commitments.

Another key challenge for increasing women's participation in new venture creation is the availability of networking

opportunities and role models. Research has shown that networking with other entrepreneurs is particularly important for women, and access to market information is crucial for accelerating business growth. However, women are traditionally excluded from men's business networks. Gauci (2020) and Camilleri-Cassar (2007) note that female entrepreneurs in Malta face a lack of networking opportunities. Azzopardi and Lubis (2019) highlight that very often female entrepreneurs have time constraints for networking and training opportunities.

Azzopardi (2014) reports that additional assistance, specifically tailored for female entrepreneurs starting new businesses, is necessary in the form of funding, mentorship, and networking. The author notes that a transformation in the traditionalist banking system is required, given that it commonly penalizes females in terms of credit because they lack collateral. The authors Azzopardi and Lubis (2019) and Zahra (2021) state that female entrepreneurs in Malta often encounter difficulties in accessing financing and credit from financial institutions. Gauci (2020) contends that female entrepreneurs face discrimination by financial institutions.

Another struggle is the lack of business knowledge, which deters women from participating in early-stage entrepreneurship. Gauci (2020) suggests that attending professional training and introducing entrepreneurship education from the age of six years at the primary schooling level would be beneficial and may enhance entrepreneurship in general. The author observes that those female participants in her research study who were over 40 years of age at the time of the research shared that they had a lack of educational knowledge.

Zahra (2021) discusses the importance of entrepreneurship education to enhance female entrepreneurship in Malta. Borg (2022) contends that female entrepreneurs in the financial services sector in Malta may tend to lack entrepreneurship education and training opportunities. The author emphasizes that

it is crucial for female entrepreneurs in the financial services sector to stay up-to-date with changes in legislation and regulations, particularly in areas relating to compliance and industry-specific requirements and regulations.

Camilleri-Cassar (2007) highlights another key struggle for women entrepreneurs, which affects women more than men. This relates to managing family responsibilities and work-life balance. The most vulnerable group in this respect are women with dependent children who commonly express problems with child care. Seeking a balance between work and family responsibilities may have a profound influence on women's entrepreneurial decisions. Managing family responsibilities and achieving a work-life balance are two significant challenges faced by female entrepreneurs in Malta, which researchers in the small island state have extensively discussed (Az-zopardi & Lubis, 2019; Camilleri-Cassar, 2007; Zahra, 2021).

Gauci (2020) states that time management is considered the biggest obstacle for female entrepreneurs in Malta, as the majority of these female small business owners are mothers who also need to manage their family roles. They need to manage the family, their career, house chores and family responsibilities. The author states that this is because a business takes a great deal of energy.

In her findings, Zahra (2021) argues that the primary challenges faced by female entrepreneurs in Malta include personal and family responsibilities, gender-related issues, difficulties in accessing credit, a lack of experience, inadequate entrepreneurial education, and difficulties in establishing supportive networks. Zahra indicates that the main challenges encountered by female entrepreneurs include family responsibilities, with females prioritizing work-life balance and the importance of a sound support system for entrepreneurs. Reference is also

made to the importance of existing incentives and highlights the need for improved incentives and support systems.

Camilleri-Cassar (2007) discusses the importance of mentoring for female entrepreneurs. Gauci (2020) further highlights the effect of female role models on existing and potential female entrepreneurs. Gauci argues that the introduction of business angels would be beneficial to enhance entrepreneurship in Malta, for both male and female entrepreneurs. The author describes business angels as investors who invest an amount of money in the initial phases of start-ups in exchange for part of the generated capital. Business angels would also have the opportunities to offer mentoring to the female entrepreneurs. The author suggests that this concept would help female entrepreneurs overcome one of the challenges of securing financial support, especially when starting a business. It may also narrow down the gender pay gap that may exist in Malta. Business angels may contribute to attracting entrepreneurs, both males and females, to initiate their own start-up.

The research study by Bonnici (2021) concludes that while the findings provide a better understanding of the potential constraints faced by women in Malta, they suggest several policy recommendations under other factors, including culture, markets, and governance, to encourage potential future research and policy development that fosters female entrepreneurship in Malta.

Malta and Indonesia

Azzopardi and Lubis (2019) state that Malta is a small island and Indonesia comprises small islands. Despite the differences in size, geography, religion and culture, both countries have female entrepreneurs. The results of this research study indicate that the main reasons for women starting a business were economic factors. Their business started off with home-based businesses in sectors like food, soap making, and dress-

making. The participants involved in this research were passionate about their businesses. The interviewed participants in this study did not aim for large-scale operations, preferring personal-level ventures. Azzopardi et al. (2019) explain that across both countries, the women prioritized family over work if needed. They received important psychological support from loved ones.

Azzopardi and Lubis (2019) indicate that both groups of female entrepreneurs participating in this research study, one in Malta and the other in Indonesia, faced similar challenges, including family responsibilities and business-related issues such as administrative barriers, a lack of capital and skills, and limited access to networks. A key difference that emerged from this research was the role of religion in both countries. Muslim women in Indonesia incorporated religious beliefs into their business practices, unlike the Maltese women.

The important role of education and financial literacy

The important role of education and financial literacy is emphasized in some studies carried out in Malta and even on an international level. Literature indicates that authors emphasize the importance of education, business education, entrepreneurship education, and financial literacy as key to success and empowerment (Aquilina, 2017; Demanuele Montebello, 2019; Zahra, 2021). The importance of entrepreneurship education programs is discussed in the literature works of local authors and international authors (Aquilina, 2017, 2020; Awogbenle & Lwuamadi, 2010; Bobotek et al. 2023; Lladós-Masllorens et al., 2021; Mullins, 2010).

Demanuele Montebello (2019) states that when an individual is empowered and works together with professionals in various fields, including building stronger self-esteem and self-confidence, they become more receptive to knowledge and learning. A holistic approach, combined with the support of

family members and family involvement, ensures a better success rate.

Researchers argue that more emphasis should be placed on this type of training and education, as opposed to business education, since entrepreneurship education is considered a life-long learning process. Demanuele Montebello (2019) considers entrepreneurship education programs as a means of encouraging entrepreneurship. The researcher states that financial and numerical skills play a significant role in fostering entrepreneurial culture, overcoming reticence, and increasing awareness of business opportunities, particularly when women are motivated to enhance their autonomy and income. The study offers meaningful implications for policymakers.

The importance of education programs to enhance female entrepreneurship in Malta is also corroborated by Zahra (2021). The author emphasizes the importance of enhancing existing market-specific vocational education, offering mentorship opportunities, and skills development training, in conjunction with entrepreneurial education, to be provided beyond tertiary schooling.

Entrepreneurship education programs

According to Mullins (2010), business entrepreneurship programs involve passing on knowledge, skills, and attitude to perform specific tasks effectively and efficiently. Entrepreneurship programs very often involve training on technical skills, business management, and personal entrepreneurial skills.

Llados-Masllorens et al. (2021) corroborate and highlight the importance of education programs for female entrepreneurs. The authors emphasize the importance of financial literacy, which encompasses knowledge and understanding. Financial literacy enables sound financial decision-making and management of personal finances, especially during challenging times and periods of uncertainty.

In his research study, Aquilina (2020) highlights that enterprise education encourages students to become entrepreneurs and enhances their entrepreneurial capabilities. Enterprise education prepares leaders committed to making a difference in their communities. The author emphasizes the need for policymakers to recognize the importance of enterprise education as it strengthens students' educational development and generates employment, contributing to economic prosperity.

According to Awogbenle and Lwuamadi (2010), entrepreneurship education offered through vocational and entrepreneurial training programs is considered an effective short-term mechanism to address problems of unemployment and poverty, especially in African countries. The authors contend that entrepreneurship programs are considered an important strategic educational approach to creating employment and improving the lives and economic independence of youths. Entrepreneurship education programs involve conveying entrepreneurial competencies to students. Dressing concepts, skills, and mental awareness are required by individuals during the process of considering and developing a business idea, and eventually setting up a business.

Addressing the challenges faced by female entrepreneurs

The results of a research study conducted by Bobotek and Schah (2023) demonstrate that female entrepreneurs face challenges such as access to resources and education, socio-cultural norms, a lack of social protection and a large and unprotected informal sector. The government and institutions should promote women's empowerment through direct labor market interventions, support for the informal sector, a gender-sensitive constitutional, legal, and institutional framework, the enforcement and oversight of gender-responsive laws and policies, and access to resources and education. The

authors also state that women require digital inclusion, entrepreneur networks, social protection and reformed socio-cultural norms. If female entrepreneurs are adequately empowered, they will contribute to their nation's human capital, economic growth, and development.

In the study conducted by Secches Kogut and Mejri (2021), the authors discuss how the challenges and uncertainties related to female entrepreneurs in emerging markets are managed. The authors capture the insecurities, self-doubts and creative survival strategies of these female entrepreneurs. The findings underscore the importance of self-efficacy and resilience, as well as the value of a support network and the ability to “reboot” when needed. Despite persistent patriarchal norms and cultures, the women surveyed did not see themselves as female entrepreneurs but as successful entrepreneurs, akin to their male counterparts.

Research studies also indicate that the coronavirus disease 2019 (COVID-19) pandemic has had a harder financial impact on women than men (Madgavkar et al., 2020). These authors emphasize the need for action by policymakers and the education community to develop training programs and other interventions that result in positive financial outcomes not only for women but society as a whole. Emphasis is placed on the need for policies that promote the development of financial and numerical skills to encourage entrepreneurial intentions among women.

METHODOLOGY

Grounded Theory is the methodological stance adopted by the researcher for this research study. Glaser (2016) states that Grounded Theory emerged as a nascent methodology for analyzing data related to patients dying in hospitals (Awareness of Dying, 1965). The Awareness Context theory captivated

the research community. This led to frequent enquiries relating to this approach. Glaser et al. (1968) published the initial formulations of Grounded Theory in *The Discovery of Grounded Theory: Strategies for Qualitative Research*.

Grounded Theory consists of a series of systematic and iterative steps for sampling, data collection and analysis, coding, creating a coding schema, memoing and reflexivity. The authors followed this process, which led to the construction of an initial conceptual model (Figure 7).

Purpose statement

The purpose of this research study is to examine the challenges encountered by female entrepreneurs in a small island state. The research stance applied is grounded theory methodology as advocated by Charmaz's (2006) constructivist approach.

This research paper aims to identify the challenges faced by female entrepreneurs in small businesses of a small island state. The primary objective of this grounded theory study is to identify and assess these challenges. Through the outcome of this research study, the researcher aims to suggest ways in which the Sustainable Development Goals (SDGs) 2030, specifically related to poverty, education, and gender equality, can be implemented. The findings and recommendations of this study contribute to addressing Sustainable Development Goal 2030, specifically relating to poverty and education, with a focus on female entrepreneurs (United Nations Development Programme, 2022).

This research question has directed this research study:

How may challenges encountered by female entrepreneurs of small businesses in a small island state be overcome?

The researcher outlines the following research objectives for this research study:

RO1: To identify the constructs encountered by female entrepreneurs of small businesses in a small island state.

RO2: To evaluate the challenges faced by female entrepreneurs of small businesses in a small island state.

RO3: To suggest ways of addressing the challenges related to female entrepreneurship of small businesses in a small island state.

Selecting the methodology of inquiry: A Grounded theory approach

This research study adopts a constructivist approach, as advocated by Charmaz (2015). This was conducted through the application of an abductive philosophical mindset, moving away from Glaser's positivist epistemological underpinnings. In this research study, the method of qualitative research was selected. The researcher has adopted grounded theory as the methodological stance.

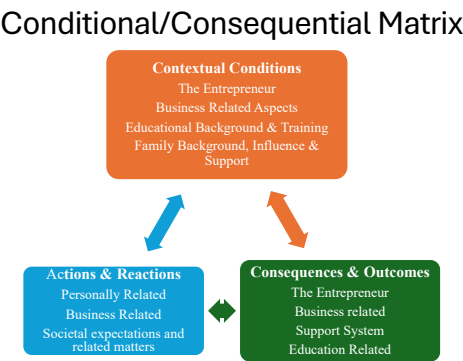
Grounded theory was selected as the methodological stance for this research study, as it has enabled the researcher to conduct interviews and develop a theory based on observations. The grounded theory approach is considered as the most appropriate method of research as it is renowned for eliciting rich insights into measures that may be taken to alleviate poverty in Malta through education. MAXQDA software was utilized to streamline the analytical procedures associated with grounded theory. This study was based on the participation of eighteen female entrepreneurs in a small island state. Interpretive and qualitative in-depth interviews were carried out with the participants. As advocated by Rubin and Rubin (2012), the researcher conducted in-depth, semi-structured interviews to elicit rich insights from participants on the research area. This study analyses grounded data to examine the process and explores the interrelationships between concepts based on Strauss and Corbin's Conditional Matrix coding paradigm.

Constructs were placed in a hierarchical structure using the Conditional Matrix coding paradigm, encompassing Contextual Conditions, Actions/Reactions and Consequences/Outcomes.

Evaluation of emergent constructs from initial research findings

MAXQDA2024 was used as a software tool for data analysis. This software is considered as a useful tool for data mapping and coding of data. The procedure that was followed included uploading the transcript of each interview on MAXQDA. The researcher followed the guidelines outlined by Charmaz (2006) relating to data collection, constant comparison, memoing and analyzing data after each interview. Constant comparison of data was implemented throughout the data analysis. Figure 2 shows the evaluation of emerging constructs relating to this research study.

Figure 2
Evaluation of emerging constructs

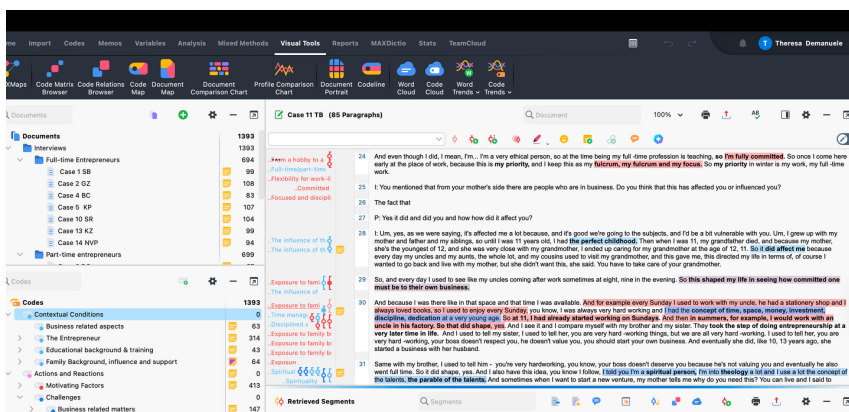


Coding

After conducting each interview, the researcher uploaded the transcript and carried out the coding process. The next interview was conducted after coding each interview. The researcher followed a four-stage coding process as outlined in Figure 3. The data analysis and coding were carried out using the qualitative software MAXQDA. In the first stage, In-Vivo Coding was carried out when coding the data collected from the first five participants. The second stage involved Open Coding, which was then followed by Focused Coding. The fourth stage involved Axial Coding.

Figure 3

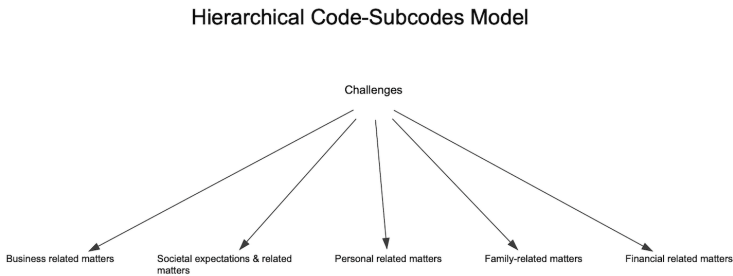
Screenshot of coding and memoing on MAXQDA



The researcher developed the category schema and created categories and sub-categories. The use of MAXQDA Visual Tools – MAXMaps is considered as a useful tool to review the category schema and to ensure that it is manageable.

Figure 4

Screenshot of code-subcodes (MAXMaps)



Sampling strategy

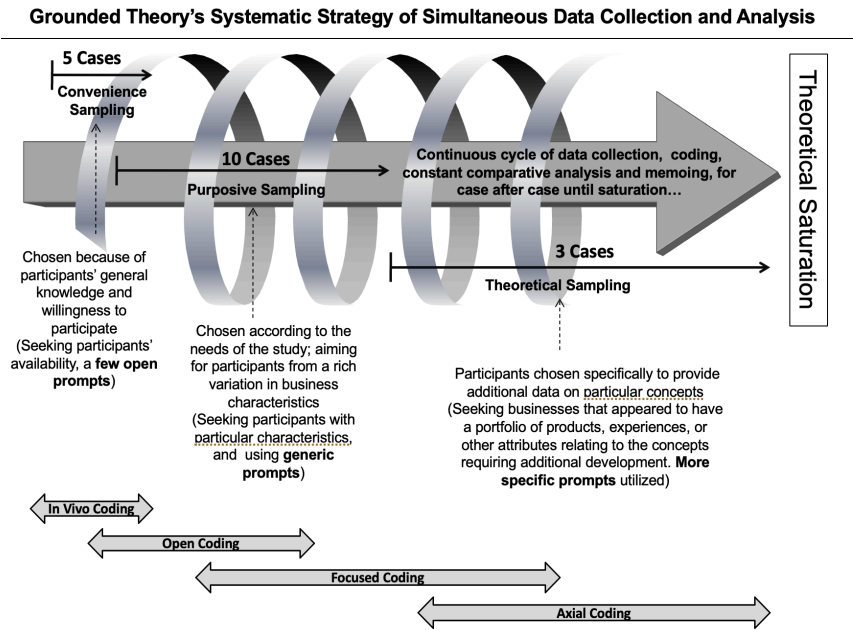
Bryant (2019) states that in qualitative inquiry, sampling is based on the researcher's evolving understanding of the phenomenon, rather than predetermined criteria as in quantitative research. The authors indicated that in qualitative research, the required sample size is unknown at the start and depends on the complexity of the phenomenon and the articulation of the participants. The adequacy of qualitative data is determined by the richness of the data obtained from participants who can describe the phenomenon, rather than statistical power. For the purpose of this research study, the researcher has adopted convenience sampling in the first five cases. This involved selecting participants based on convenience and expertise, with the researcher seeking individuals who were likely to have relevant experience or knowledge. As the researcher's understanding increased, participants were selected based on the needs of the study or developing theory, a process known as theoretical sampling.

Aquilina (2017) emphasizes the intentional selection of information-rich cases. Researchers typically begin with convenience sampling, choosing participants who are readily accessible. As data collection and analysis progress, emerging insights

guide the researchers toward identifying variations and uncovering new areas of interest, which then lead to purposive sampling. While theoretical sampling is not applied in this initial phase, it is planned for subsequent stages of the research (Aquilina, 2017).

For the purpose of this research, the researcher has followed the grounded theory’s systematic strategy of simultaneous data collection and analysis, adapted from the study of Rizzo et al. (2024). Figure 5 illustrates the sampling strategy and coding process used for this research.

Figure 5
Grounded theory’s systematic strategy of simultaneous data collection and analysis



Source: Adapted by authors from the study of Rizzo et al. (2024)

For the purpose of this research study, convenience sampling was adopted in the first stage, where five participants were selected. Convenience sampling is a type of non-probability sampling in which participants are chosen based on their easy availability and accessibility to the researcher. Purposive sampling was adopted to recruit the next set of participants. These cases amounted to ten. The approach for selecting each participant for a grounded theory study involves collecting data from each interview, analyzing the data, and then selecting the next participant.

Theoretical sampling was adopted for the next three cases. Theoretical sampling is a core methodological component of grounded theory research, which is characterized by the simultaneous process of data collection and data analysis. Unlike conventional research designs, which determine sampling strategies at the outset, theoretical sampling is an iterative and emergent process. As patterns and categories emerged during data analysis, the researcher purposefully selected subsequent data sources to explore, elaborate on, or refine these emerging theoretical constructs. This adaptive approach ensures that the developing theory is grounded in data and remains responsive to conceptual gaps identified throughout the research process.

Data management strategy

Data management involved four phases. The first phase involved importing the Word document file containing the transcripts for each interview. This was uploaded onto the document group and saved into one MAXQDA project file. Two sets of document groups were created, one including cases related to full-time entrepreneurs and the other including cases related to part-time entrepreneurs. The second phase involved analyzing the data within each file and forming concepts by creating codes, transforming them to common themes and linking them to the respective category. The researcher

followed the axial coding process as outlined by Corbin et al. (2008), and the category framework was classified into contextual conditions, actions, reactions, consequences and outcomes (Figure 2).

The first phase involved importing the first transcript related to the first case into MAXQDA software. This was followed by the second phase, which involved data analysis and the creation of codes, common themes, and categories. The third phase involved formulating memos. As stated by Lempert (2007), memoing allows the researcher to capture thoughts, ideas and insights into the data, which are then integrated into the research study. The fourth phase involved continuously comparing data with existing codes. In the absence of an existing code, a new code was created within the MAXQDA coding structure. The four phases were conducted for every transcript, with a new transcript created for each interview conducted. The researcher ensured that the data was backed up occasionally to minimize the risk of data loss.

Constant comparison

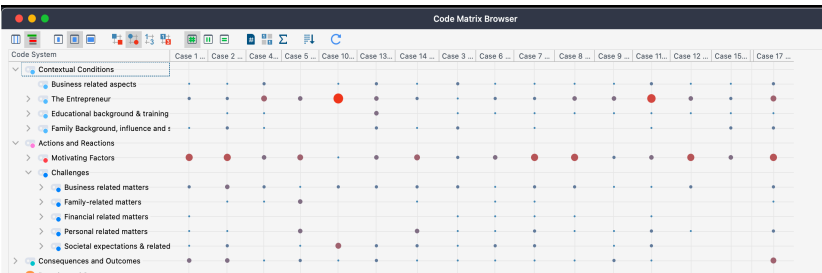
Constant comparison was carried out by the researcher whilst analyzing the data collected for the purpose of this research study. This involved continuously comparing incidents to one another, as well as to codes, categories, and subcategories. Through this process, key constructs related to the challenges faced by female entrepreneurs in a small island state began to emerge (Birks & Mills, 2015). Using a hierarchical approach, concepts were organized. This was carried out by grouping them into categories, sub-categories, properties, and dimensions, following Corbin and Strauss's (2015) framework. Categories represent broad concepts made up of smaller, related ideas. Sub-categories serve as intermediate concepts tied to broader categories. According to Charmaz (2006), properties are elements of a sub-category that describe

parts of an object or action, while dimensions add further detail by highlighting variation and scope within properties.

Use of visual tools

The researcher considers MAXQDA a useful tool for data analysis and the presentation of findings. The Code Matrix Browser, as illustrated in Figure 6, highlights the key findings that emerged from this research study. This tool is considered suitable for identifying the main themes that emerged from this research study. It is useful to back up the findings of the research. MAXMaps enabled the researcher to conduct a comparison between the full-time and part-time female entrepreneurs.

Figure 6
Screenshot of code matrix browser on MAXQDA



Ethical considerations

As contended by Frankfort-Nachmias et al. (2015), any research process should encompass ethical issues relating to voluntary participation, confidentiality and anonymity. For this research study, the researcher has followed the ethical issues as spelt out by Creswell (2014). Following the approval of this research study by the MCAST Ethics Committee, the researcher initiated the study and contacted the participants.

Prior to each interview, the researcher informed each participant about the purpose of the study.

The researcher ensured that the identity of the participants in the study was protected at all times. The researcher ensured complete anonymity of the data collected during each interview. The participants were informed about their rights and that they had the freedom and autonomy to withdraw from the study at any time. The recording and transcript of each interview were stored in a secure place and were only accessible by the researcher. Access to the researcher's computer is password-protected.

The identity of the participants in the study was protected at all times. The researcher used pseudonyms to ensure confidentiality. Informed consent was requested and obtained from all the participants in this research. The researcher ensured that the adopted data collection process posed no risk to the participants. While conducting this research study, the researcher ensured that they addressed the issues of physical harm, business harm, and moral harm with great responsibility. The interviews were conducted in a safe environment and at a location preferred by the participant. This helped to address the issue of physical harm.

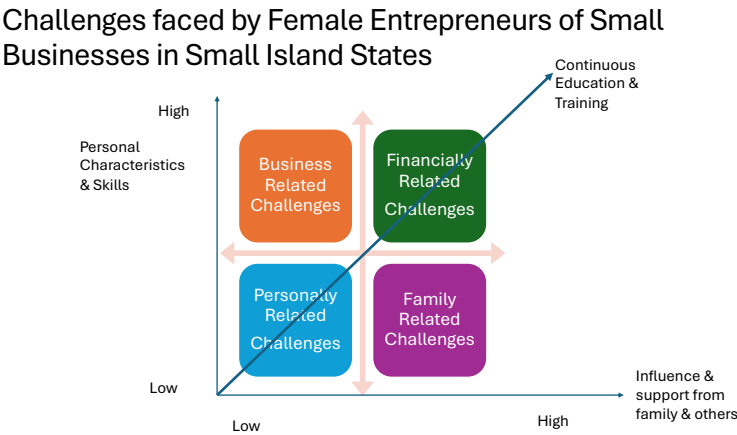
RESULTS

Results indicate that the challenges faced by female entrepreneurs in a small island state encompass business-related matters, personal and family-related issues, and financial difficulties. The personal characteristics of ambition, determination and perseverance are crucial for success. Exposure to business and enterprise education plays a crucial role in enabling entrepreneurs to enhance organizational performance. Knowledge of IT skills and eagerness to learn about accounting software programs, use of digital marketing and having an

entrepreneurial mindset are effective contributors to success stories.

The main themes that emerged from this research study indicate that female entrepreneurs in Malta face five main types of challenges. These include business-related challenges and business growth, personal and family-related matters, family responsibilities, societal expectations, culture and related matters. Preliminary results of this research study enabled the researcher to construct a preliminary process model (Figure 7).

Figure 7
Preliminary process model



It is observed that some of the findings emerging from this research align with those presented in the literature review. However, it is noted that none of the participants reported difficulties in accessing credit or gender-related challenges. The researcher had discussed these issues with all the participants. Most of the participants highlighted that they do not expect to be treated differently because they are women entrepreneurs.

Findings show that the participants value the importance of entrepreneurial education. Importance is given to areas

relating to IT, accounting and digital marketing. Being exposed to business-related subjects during their secondary and tertiary level of education is considered a competitive advantage by some of the participants. These findings align with the results of a research study conducted by Zahra (2021). The majority of participants have indicated that they would be interested in pursuing such courses, even if they were not offered for free, but for a fee. Most participants stated that such educational courses should not only be offered to female entrepreneurs but to the public at large.

The importance of business and enterprise education has emerged strongly in the findings of this research study. The need and benefits of enterprise education were also highlighted in a study conducted by Aquilina et al. (2020). Most of the participants have highlighted the need for courses to be organized for the public. Business and entrepreneurship education are considered vital for both existing and potential entrepreneurs. Such educational programs are considered beneficial by the participants, as they may provide training in technical skills, business management, and personal entrepreneurial skills. These findings corroborate the findings of Aquilina and Rizzo (2020). The authors discuss the benefits of enterprise education. They state that students who pursue entrepreneurship education programs should exhibit innovative business behavior, generate ideas and enable students to think critically and reflectively.

The majority of participants have emphasized the importance of keeping abreast with changes and being aware of current legislation and tax obligations. Participants have emphasized the importance of adhering to deadlines for submitting tax returns and payments related to income tax and Value Added Tax. Participants emphasized the need of engaging professionals to help them in these areas, as non-conformity very often leads to penalties which are quite costly.

Most participants emphasized the importance of work-life balance and the well-being of female entrepreneurs. Personal and family responsibilities are significant concerns for most participants, especially those with young children. Gauci (2020) states that most female entrepreneurs find it hard to attend networking events, especially due to family responsibilities. These important challenges are also discussed by Maltese researchers when examining the challenges faced by female entrepreneurs in Malta (Camilleri-Cassar, 2007; Zahra, 2021). Participants have emphasized the importance of supportive networks, highlighting the need for assistance with personal and family-related issues. This area was also discussed by Zahra (2021).

All the participants in this research study have highlighted that one of the major challenges is achieving a work-life balance. This finding aligns with the literature, both from the local and the international context. Azzopardi and Lubis (2019) and Camilleri-Cassar (2007) discuss this challenge. The authors affirm that one of the major challenges of mumpreneurs is achieving a work-life balance, with particular reference to balancing work and family life.

The female entrepreneurs who have participated in this research study have highlighted the importance of time management and self-discipline. The participants stated the importance of self-care and well-being. Most of them try to plan ahead and act accordingly. A few participants stated that they give importance to sports, exercise and to what they eat. They prioritize their personal and mental well-being, believing it helps them achieve a better work-life balance and manage the various responsibilities they have, both at work and at home.

Some of the participants have discussed the need for mentoring programs. Two of the participants have expressed their gratitude towards the mentors who have helped them believe in themselves, become more skilled, and flourish. Their

mentors were females. This finding is in line with the findings of Gauci (2020) who highlights the important role of mentors for female entrepreneurs in Malta.

One of the participants, who has been a mentor in the fashion industry, shared with the researcher that she embraces mentoring opportunities. She points out she was not afraid of competition. She looked at mentoring as a collaboration opportunity. She stated that mentoring is beneficial to all involved. It is an opportunity for individuals to learn from each other and is not considered as competition. Some participants have also discussed their belief in collaboration, as they believe it provides opportunities for growth and networking.

CONCLUSIONS

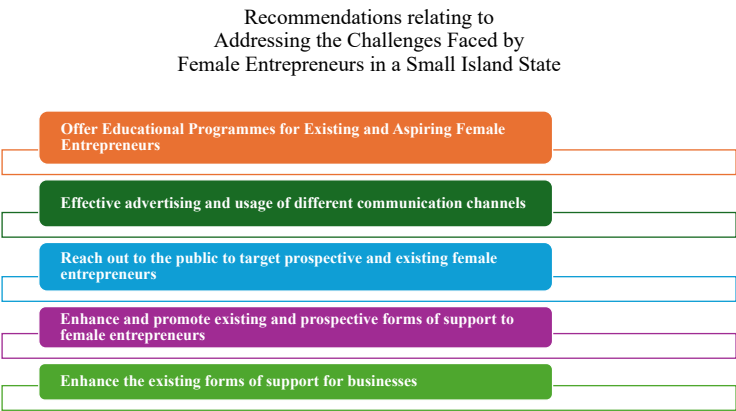
The conclusions of this research study highlight the need for diverse educational programs and forms of support to overcome the challenges faced by female entrepreneurs in small businesses. Such educational programs include business and enterprise education, IT skills and digital marketing.

Emphasis is placed on the crucial role of continuous education and training, with particular reference to business education and enterprise education being included in the school curricula, as early as early years education. Training should be offered to educators working in schools across all levels to encourage business and enterprise education to be embedded in the teaching and learning of students from the early years. This training may be addressed as part of the Continuous Professional Development of educators. Students currently being trained to become educators should be exposed to business and enterprise education to equip them to incorporate these aspects into their teaching in the near future.

RECOMMENDATIONS

Based on the findings and conclusions of this research study, the researcher presents a number of recommendations (Figure 8).

Figure 8
Recommendations relating to addressing challenges faced by female entrepreneurs in a small island state



Recommendation 1: Offer educational programs for existing and aspiring female entrepreneurs

There searcher recommends that training programs be offered to existing and potential female entrepreneurs, as well as to the public. This would help support and encourage entrepreneurship in general. Recommendations include offering training in setting up a business, managing a business, and preparing a business plan.

Based on the feedback from the participants in this research study, courses related to legal, tax, VAT, Social Security Contributions, and related matters are highly recommended. The participants have highlighted the need for training in IT skills

and creating and maintaining a website as a necessity. Training in Digital Marketing and the use of social media for advertising was given great importance by the participants, as well as creating a website to promote the products and services offered by their business. Most participants indicated that they are willing to attend educational courses in most of the courses listed above and gave the highest importance to accountancy-related courses.

The recommendations put forward indicate the need for training in preparing budgets and business plans, in addition to the preparation of basic financial statements. Most of the participants also indicated that they are willing to pay for such courses.

Recommendation 2: Effective advertising and usage of different communication channels

Effective forms of advertising should be used to ensure reaching a wide target audience. Accurate information must be shared with the public at large, particularly with existing and potential entrepreneurs. Details on existing services provided by government agencies, NGOs, Malta Enterprise and other entities, as well as services offered by financial institutions, should be made available regularly.

Such modes of advertising and information communication may include advertisements on TV and radio stations, podcasts, webinars, conferences, and meetings in local councils. Special information sessions should be organized for different audiences, including the public at large, as well as students, existing and aspiring female entrepreneurs.

Recommendation 3: Reach out to the public to target prospective and existing female entrepreneurs

Communicating the correct information using various forms of advertising, including outreach to the community

through information sessions organized at Local Councils. Such sessions may provide information on financial literacy, financial institutions and credit facilities, as well as details about educational programs targeted at individuals interested in starting a business or those who have already established one. It is recommended that these educational sessions provide information relating to enterprise skills, entrepreneurship education and enterprise education.

Recommendation 4: Enhance and promote existing and prospective forms of support to female entrepreneurs

Different incentives be offered to address the challenges faced by existing and potential female entrepreneurs. Such incentives may relate to support in addressing challenges related to family responsibilities. These may include childcare services, after-school care and curricular activities. Support is also needed for the care of elderly parents.

Tax credits may be offered to entrepreneurs, especially in the first years of their business. Access to credit should be enhanced. Offering financial incentives, such as a low interest rate on borrowings, especially during the business setup process and in its first years of operation.

Recommendation 5: Enhance the existing forms of support for businesses

Existing forms of support for businesses be improved. Various entities currently offer support to entrepreneurs and businesses. These include government departments and agencies, as well as financial institutions. Support is offered to existing and aspiring entrepreneurs. There must be dissemination of information about the existing services relating to setting up a business and funding. Banks and financial institutions offer support and assistance, including various forms of business financing.

The Malta Enterprise offers advice, support and assistance to aspiring and existing entrepreneurs, including the facility of operating from the Business Incubation Centre in Corradino, Paola. The Malta Chamber of SMEs supports small and medium enterprises in Malta and organizes events and conferences.

It is recommended to encourage mentoring programs for aspiring and new female entrepreneurs to offer better opportunities, advice, support and assistance. Private businesses should be given financial or tax incentives for mentoring and exposure to new small businesses owned by women.

Agencies and private businesses may offer funding programs to support women entrepreneurs. This would enable women entrepreneurs to acquire skills to start and support small businesses. Resources may be provided. Private businesses may offer online and hybrid training.

The U.S. Embassy in Malta undertakes a similar initiative through the Academy for Women Entrepreneurs, which offers opportunities to females, including the chance to foster networks that support participants' access to one-on-one mentoring from business partners, as well as funding programs for female entrepreneurs.

The recommendations presented by the researcher were derived from the data collected from the participants in this research study. Some of the findings align with the existing literature. In her research, Zahra (2021) presents three main propositions for enhancing female entrepreneurship in Malta and addressing the challenges it poses. The study focuses on the rise of female entrepreneurship in the small island state of Malta.

Zahra (2021) discusses propositions relating to her research study. She emphasized the importance of entrepreneurial education, the availability of credit facilities, and the provision of relevant and accessible mentoring programs and networking

opportunities. The author emphasizes the importance of entrepreneurial education and states that this should be provided beyond tertiary schooling to ensure females are acquainted with entrepreneurship from a young age and prepared for high-performance entrepreneurship.

Higher educational institutions should promote the entrepreneurial culture and self-employment as an ideal career choice for female students. Emphasis was placed on the availability of credit facilities. It was stated that financial institutions should become more responsive to the specific needs of female entrepreneurs. This can be achieved by offering tailored products and services that exceed traditional collateral-based requirements.

Alternative financing programs and agreements should be established to facilitate credit access for women. Relevant and accessible mentoring programs and business networks should be created to support female entrepreneurs in starting, managing, and growing their businesses. A digital one-stop shop should be developed to provide useful information and advice for female entrepreneurs.

Propositions

The researcher presents five propositions, as illustrated in Figure 9. The author highlights the importance of educational programs tailored to the needs of female entrepreneurs, the value of targeted outreach initiatives, the use of diverse and effective communication, and promoting and improving existing and emerging support mechanisms, as well as strengthening general business support structures.

Figure 9
Propositions

Addressing the Challenges Faced by Female Entrepreneurs of Small Businesses in the Small Island State of Malta: Propositions



Concluding remarks

Addressing the challenges faced by female entrepreneurs in small island states, such as Malta, requires a combination of strong personal attributes and effective external support mechanisms. Women entrepreneurs must often demonstrate resilience, self-discipline, effective time management, and a proactive attitude toward lifelong learning and skills development. These individual characteristics are essential to navigating the structural and societal barriers that may exist within a limited economic and geographic context. Furthermore, the role of supportive ecosystems, including partners, spouses, family members, and the broader community or institutional networks, cannot be overstated. These support systems serve as critical enablers, helping to mitigate the isolation and constraints that female entrepreneurs may experience, and are fundamental in fostering a greater number of sustainable and successful women-led ventures in the small island state of Malta.

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UNIVERSAL DESIGN FOR LEARNING: A PATHWAY TO INCLUSIVE EDUCATION

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Abstract

Universal Design for Learning (UDL) is a framework that fosters inclusive education by addressing learner variability through flexible instructional methods. Grounded in cognitive neuroscience, UDL promotes equity by offering multiple means of engagement, representation, and action/expression. This study explores the foundational principles of UDL, its theoretical basis, and practical applications. A qualitative analysis of literature and case studies examines UDL's effectiveness in enhancing student engagement and learning outcomes while reducing barriers for diverse learners. The literature review follows the Joyner model to ensure a systematic analysis of existing research. The discussion adopts a structured approach by contextualizing UDL within inclusive education, aligning it with contemporary learning theories, and presenting case studies that highlight its impact. Challenges such as teacher preparedness and resource availability are addressed. The findings underscore UDL as a transformative approach that benefits all learners. By bridging research and practice, this presentation advocates systemic changes to support the integration of UDL in educational settings. Recommendations for educators, administrators, and policymakers are provided to enhance UDL adoption, fostering equitable and accessible learning environments.

Keywords

Universal Design for Learning (UDL), inclusive education, learning accessibility, student engagement, educational equity

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INTRODUCTION

The shift toward inclusive education has highlighted the need for pedagogical frameworks that accommodate diverse learners, ensuring equitable access to education for all students. Universal Design for Learning (UDL) has emerged as a critical model for fostering inclusivity by addressing learner variability through flexible instructional methods (Meyer et al., 2014). UDL provides a proactive approach to curriculum design by embedding flexibility and accessibility from the outset. Instead of retrofitting content for diverse learners, UDL integrates engagement, representation, and expression at the core of instructional practices (Novak & Rodriguez, 2021). By emphasizing proactive curriculum design rather than reactive accommodations, UDL ensures that all students—regardless of their abilities, learning preferences, or backgrounds—can access and engage with educational content effectively (Novak & Rodriguez, 2019).

The next section explores the theoretical foundations of UDL, detailing its cognitive neuroscience basis and alignment with established learning theories.

REVIEW OF LITERATURE

The implementation of Universal Design for Learning (UDL) has demonstrated significant potential in improving student engagement, learning outcomes, and accessibility across various educational levels. A growing body of empirical research supports the effectiveness of UDL in enhancing learning experiences for students with diverse learning needs, particularly in higher education and K-12 settings (Al-Azawei et al., 2016).

Studies have identified that when multiple means of engagement, representation, and expression are incorporated into instructional design, students exhibit higher

motivation, better retention rates, and improved comprehension of learning materials (Tobin & Behling, 2018).

In a meta-analysis of UDL implementation in postsecondary education, Capp (2017) found that courses integrating flexible instructional strategies saw an increase in student participation and self-efficacy compared to traditional lecture-based courses. This was particularly evident in online learning environments, where UDL-driven design principles—such as captioning, multiple content formats, and adaptive assessments—enhanced student satisfaction and retention rates (Kumar & Wideman, 2019). In K-12 education, Rao et al. (2020) conducted a longitudinal study in inclusive classrooms, reporting that UDL-based interventions resulted in higher levels of engagement, reduced drop-out rates, and greater academic achievement among students with disabilities.

Despite these promising results, some researchers argue that empirical evidence on UDL's direct impact remains limited due to the variability in implementation strategies across institutions (Lombardi et al., 2021). A recurring critique is that many studies rely on qualitative self-reports rather than controlled experimental designs, making it difficult to isolate UDL's effect from other instructional variables (Smith & Lowrey, 2020). Addressing these research limitations is crucial to establishing more definitive causal relationships between UDL principles and student success metrics.

Challenges in UDL implementation

Although UDL is widely regarded as a transformative educational framework, its implementation remains inconsistent due to multiple barriers, including faculty preparedness, institutional resistance, and resource constraints (Ok

et al., 2017). One of the most cited challenges in the literature is the lack of professional development and teacher training. A survey conducted by Lombardi et al. (2021) found that only 35% of higher education faculty reported feeling confident in applying UDL principles in their teaching, while the majority expressed uncertainty about how to translate UDL guidelines into effective classroom strategies.

Moreover, educators often perceive UDL adoption as time-intensive due to the need for redesigning curricula, assessments, and instructional materials (Black & Moore, 2019). The absence of structured institutional support further complicates implementation efforts, as many faculty members receive limited guidance on UDL integration within existing pedagogical frameworks (Alvarez, 2020). In addition, some institutions resist UDL adoption due to ingrained traditional teaching models that emphasize standardized assessments and rigid curricula rather than learner-centered approaches (Hall et al., 2021).

Another significant challenge is the lack of standardized assessment tools to measure UDL's effectiveness. While case studies suggest positive student outcomes, empirical studies highlight the difficulty of quantifying UDL's impact in a consistent and replicable manner (Rao et al., 2020). This lack of standardized evaluation metrics hinders large-scale adoption and makes it difficult for policymakers to justify resource allocation for UDL initiatives (Basham et al., 2020).

Case studies of UDL implementation

Several real-world case studies provide valuable insights into how UDL is being successfully implemented in higher education, K-12 settings, and specialized programs:

1. DO-IT Center, University of Washington (Higher Education, STEM Fields)—The Disabilities, Opportunities, Internetworking, and Technology (DO-IT) Center has been a leader in applying UDL principles to STEM education. Through its AccessSTEM and AccessComputing initiatives, the center has reported that students with disabilities who participated in these UDL-based programs had a 100% high school completion rate, significantly higher than the national average for students with disabilities (Burgstahler, 2021). The program's success has been attributed to personalized learning support, flexible instructional methods, and technology-assisted engagement strategies.

2. University of New Hampshire's Institute on Disability (Higher Education, Course Redesigns)—The Institute on Disability at the University of New Hampshire collaborated with faculty to redesign traditional courses using UDL principles. Instructors integrated adaptive learning platforms, digital tools, and alternative assessment methods to enhance accessibility (Davies et al., 2020). Post-implementation evaluations indicated that students, particularly those with disabilities and non-traditional learners, perceived the redesigned courses as more engaging and accommodating.

3. Bartholomew Consolidated School Corporation (BCSC), Indiana (K-12, Inclusive Education)—BCSC is one of the first district-wide implementations of UDL in the United States. The school district adopted UDL principles across all grade levels, incorporating multi-modal instruction, flexible grouping, and personalized learning pathways (Meo, 2020). Following the initiative, the district reported higher graduation rates, lower dropout rates, and a reduction in disciplinary incidents, demonstrating UDL's long-term benefits in K-12 education.

4. Tech Kids Unlimited (TKU), New York City (Neurodivergent Students, Technology Education)—TKU is a

nonprofit organization that applies UDL principles to teach technology and computational thinking to students with Autism Spectrum Disorder and other learning challenges. By utilizing project-based learning and assistive technology, TKU has successfully increased engagement and technical proficiency among neurodiverse students (Black & Moore, 2019).

5. Cranfield School of Management’s ‘Exploring Sustainable Futures’ (Experiential Learning, Higher Education)—Cranfield School of Management developed a role-playing board game designed to help students engage with sustainability concepts using UDL-driven experiential learning techniques (Watson & Watson, 2018). Over 2,500 students have participated in the game, and evaluations show that it enhanced critical thinking skills and decision-making abilities by providing multiple engagement pathways.

6. Saints College, Fitzroy North Campus, Australia (Radically Inclusive Education for Neurodivergent Learners)—Opened in 2024, Saints College was designed specifically for neurodivergent students, including those with Autism and ADHD. By utilizing small class sizes, flexible curricula, and on-campus allied health services, the school has created an inclusive, structured, and adaptable learning environment (Hall et al., 2021). Early outcomes suggest that students in this UDL-based school demonstrate improved academic performance and social integration.

7. Wisconsin Collaboratory for Enhanced Learning (WisCEL), University of Wisconsin-Madison (Active Learning, Higher Education)—WisCEL promotes non-traditional instructional models through flipped classrooms, problem-based learning, and technology-enhanced learning spaces. Research indicates that students in WisCEL courses perform better in assessments and exhibit higher levels of

engagement compared to traditional lecture-based courses (Smith & Lowrey, 2020).

Although case studies and empirical research validate UDL's potential, gaps remain in longitudinal studies, large-scale randomized trials, and global research outside North America and Europe (Basham et al., 2020). Future research should focus on developing standardized evaluation metrics and explore UDL's intersection with other pedagogical models, such as Culturally Responsive Teaching and Differentiated Instruction (Lombardi et al., 2021).

Theoretical framework

Universal Design for Learning (UDL) is an educational framework developed to create inclusive learning environments that accommodate diverse student needs. It is deeply rooted in cognitive neuroscience, which explains that learning involves three primary brain networks: the affective network (engagement and motivation), the recognition network (processing and understanding information), and the strategic network (planning and executing tasks) (Meyer et al., 2014).

Recent advances in neuroimaging studies confirm that students with ADHD demonstrate reduced dopamine activity in the prefrontal cortex, affecting their ability to sustain attention (Smith et al., 2021). Similarly, dyslexic learners show differences in the temporoparietal region, necessitating multimodal learning support, such as speech-to-text tools and visual organizers (Garcia & Martinez, 2022). UDL framework aligns these neurological processes with pedagogical approaches, ensuring that educational materials and instructional strategies cater to individual differences rather than a one-size-fits-all approach (CAST, 2018).

Cognitive neuroscience and UDL

Recent findings in cognitive neuroscience emphasize that learning is a neurobiological process involving distinct yet interconnected brain networks. UDL recognizes this variability in neural pathways and incorporates flexible instructional methods to enhance engagement, comprehension, and expression (Brown et al., 2021).

The affective network, linked to motivation and emotional engagement, is primarily associated with the limbic system, amygdala, and prefrontal cortex (Garcia & Martinez, 2022). This network influences how students develop interest and persist in learning tasks. For example, neuroimaging studies indicate that students with ADHD have lower dopamine levels in the prefrontal cortex, making it difficult to maintain focus (Smith et al., 2021). UDL principles address this by promoting multiple means of engagement, such as offering students choices in assignments, integrating gamified learning, and providing interactive content.

The recognition network, responsible for processing and interpreting information, is associated with the occipital and temporal lobes and plays a central role in visual and auditory processing (Novak & Thibodeau, 2021). Dyslexic learners, for instance, show different activation patterns in the left temporoparietal region, requiring alternative means of representation, such as audiobooks, text-to-speech tools, and graphic organizers (Rao et al., 2021). UDL responds to this diversity by ensuring that information is presented in multiple formats, making learning accessible to all students.

The strategic network, which governs executive functioning and task execution, is primarily controlled by the prefrontal cortex and motor cortex (Lombardi et al., 2021). This network is crucial for self-regulation and problem-solving. Students with working memory deficits or

executive dysfunctions often struggle with organizing and expressing ideas. UDL addresses this challenge by incorporating multiple means of action and expression, allowing students to demonstrate their knowledge through varied methods, such as oral presentations, multimedia projects, or hands-on activities (Basham et al., 2020).

By aligning pedagogical practices with cognitive neuroscience, UDL transforms education from a rigid, one-size-fits-all system into a dynamic, learner-centered model. The integration of neuroscientifically validated learning strategies within UDL has been shown to increase student engagement, reduce dropout rates, and improve academic performance (Rao et al., 2021).

Principles of Universal Design for Learning

The UDL framework is built upon three core principles, which guide educators in creating flexible and accessible learning experiences:

1. Multiple Means of Engagement

This principle focuses on motivation and emotional investment in learning. Since students differ in their interests and cognitive engagement, UDL provides diverse options to sustain attention and persistence (Novak & Thibodeau, 2021). Educators implement engagement strategies by:

- Offering choice-based learning (e.g., selecting projects or assignments).
- Using active learning strategies, such as gamification and collaborative tasks.
- Providing supportive learning environments, including clear goals, feedback, and emotional scaffolding (Smith et al., 2020).

This principle aligns with Self-Determination Theory (Deci & Ryan, 2000), which states that students are more

engaged when they feel autonomy and competence in their learning experiences.

2. Multiple Means of Representation

Since the learners process information in diverse ways, UDL encourages instructors to present content in multiple formats to enhance comprehension (Hall et al., 2020).

- Text-based content should be complemented by audio, video, and graphic elements.
- Information should be customizable, allowing students to adjust text size, contrast, or playback speed.
- Concepts should be reinforced through interactive visual aids and real-world examples.

This principle is particularly beneficial for students with learning disabilities, second-language learners, and neurodivergent individuals, ensuring barrier-free access to knowledge (Rao et al., 2021).

3. Multiple Means of Action and Expression

Since students demonstrate understanding in different ways, UDL supports flexibility in assessment and participation (Basham et al., 2020). Traditional exams and essays are complemented by:

- Oral presentations, video projects, hands-on activities, and portfolios.
- Technology-assisted assessments, including speech-to-text tools and adaptive testing.
- Opportunities for self-regulation and goal-setting, fostering executive functioning and problem-solving skills (Lombardi et al., 2021).

This principle reflects constructivist learning approaches, which emphasize active knowledge construction through experience rather than passive reception (Novak & Rodriguez, 2021).

Alignment with learning theories

UDL's foundation in neuroscience and variability aligns with established educational theories, reinforcing its scientific and pedagogical validity.

1. **Vygotsky's Social Constructivism**—Lev Vygotsky's Social Learning Theory (1978) states that knowledge is constructed through social interaction and cultural context. His Zone of Proximal Development (ZPD) suggests that learners achieve higher cognitive development with guided support.

- UDL aligns with this theory by promoting scaffolded learning, peer collaboration, and differentiated instruction (Rao et al., 2014).
- Example: UDL classrooms use structured peer mentoring, allowing students to learn from more knowledgeable peers, reinforcing Vygotsky's model.

2. **Constructivist Learning Theory**—Jean Piaget's Constructivist Learning Theory (1952) emphasizes that learners actively construct knowledge through experience.

- UDL embraces this principle by encouraging problem-solving, real-world applications, and hands-on learning (Capp, 2017).
- Example: Instead of passive lecture-based learning, a UDL-based classroom uses project-based and experiential learning to facilitate deep knowledge construction.

3. **Self-Determination Theory and Learner Motivation**—Self-Determination Theory (Deci & Ryan, 2000) states that students are more motivated when their autonomy, competence, and relatedness are supported.

- UDL fosters autonomy by allowing students to choose how they engage with material (Novak & Rodriguez, 2021).

- Example: A UDL instructor may offer multiple assignment formats (essay, podcast, infographic), reinforcing learner agency and motivation.

By integrating cognitive neuroscience, constructivist learning theory, and motivation research, UDL provides a scientifically validated, flexible framework for inclusive education. Its emphasis on proactive instructional design and multiple engagement strategies ensures that students of all abilities and backgrounds can achieve academic success.

METHODOLOGY

Statement of the problem

Despite advancements in educational policy and pedagogy, many students continue to experience barriers that hinder their learning and academic success. Traditional curricula, rigid instructional strategies, and standardized assessment methods often fail to accommodate students with disabilities, diverse linguistic backgrounds, or unique learning preferences (Rao et al., 2014).

The lack of flexibility in these systems disproportionately affects marginalized learners, reinforcing educational inequalities and limiting opportunities for academic achievement (Al-Azawei et al., 2016). UDL offers a solution by embedding accessibility and adaptability into the instructional design process, thereby minimizing the need for later modifications. However, implementing UDL in educational settings presents challenges, including insufficient teacher training, limited institutional support, and a lack of resources for effective application (Capp, 2017). Addressing these issues is crucial for ensuring that UDL becomes an integral component of inclusive education.

Objective of the study

The primary objective of this study is to explore the foundational principles, theoretical basis, and practical applications of UDL in contemporary education. By examining recent literature and analyzing case studies, this research seeks to demonstrate the impact of UDL on student engagement, learning outcomes, and educational accessibility (Edyburn, 2020). The study also aims to identify the challenges associated with UDL implementation and provide recommendations for educators, administrators, and policymakers to facilitate its adoption. By bridging research with practice, this work advocates for systemic changes that support UDL integration in diverse educational contexts.

Research questions

This study is guided by the following research questions:

1. What are the core principles of Universal Design for Learning (UDL), and how do they align with contemporary learning theories?
2. How does the implementation of UDL influence student engagement and learning outcomes in diverse educational settings?
3. What are the primary challenges educators face when adopting UDL, and what strategies can mitigate these challenges?

By addressing these questions, this study aims to contribute to the ongoing discourse on inclusive education and provide practical insights into the role of UDL in fostering accessible and equitable learning environments.

Research design

This study employs a qualitative research design, incorporating a systematic literature review and case study

analysis to examine the theoretical foundations, practical applications, and challenges of Universal Design for Learning (UDL) in diverse educational contexts. Qualitative research is particularly appropriate for this study as it allows for an exploratory and interpretive approach, essential for understanding the complexities of UDL implementation (Merriam & Tisdell, 2016).

A systematic literature review provides a structured synthesis of existing research, ensuring that findings are contextualized within the broader academic discourse (Snyder, 2019). Given that UDL is a conceptual and pedagogical framework, qualitative research enables the study to examine both theoretical perspectives and empirical implementations, making it an effective method for analyzing how UDL principles are integrated into diverse educational settings (Aguayo et al., 2021).

Additionally, case study analysis was incorporated to explore practical examples of UDL implementation. Case studies allow for an in-depth examination of real-world applications of UDL, providing context-specific insights into its effectiveness, barriers, and best practices (Yin, 2018). The combined approach of literature review and case study analysis ensures that the study maintains both theoretical depth and practical relevance (Creswell & Poth, 2018).

To maintain methodological rigor, this study follows the Joyner Model of literature review, which ensures that research is systematically structured, critically analyzed, and thematically categorized (Joyner et al., 2018). The Joyner Model is widely applied in educational research, ensuring that the literature review is not merely descriptive but analytical, allowing for a critical evaluation of existing research on UDL (Boote & Beile, 2016).

This model follows four key phases:

1. Problem Identification – Establishing the need for UDL in inclusive education, addressing current challenges in pedagogy.
2. Literature Search and Selection – Identifying peer-reviewed articles and empirical studies published within the past 5-7 years, ensuring relevance and academic rigor.
3. Thematic Categorization and Critical Analysis – Organizing the research into conceptual categories such as UDL's theoretical foundations, empirical evidence, implementation challenges, and case study applications.
4. Synthesis and Interpretation – Connecting research findings to broader theoretical discussions and identifying gaps for future exploration.

Following this structured approach ensures that the literature review is methodologically sound, systematically structured, and critically analytical (Machi & McEvoy, 2021).

To complement the systematic literature review, case study analysis was used to explore how UDL has been successfully implemented in diverse educational contexts. Case study research is widely recognized as an effective qualitative method for analyzing educational interventions, as it allows for an in-depth understanding of UDL's impact in real-world settings (Stake, 2019).

To ensure academic rigor and relevance, the following selection criteria were applied:

1. Relevance to UDL Implementation—The selected case studies explicitly document the application of UDL principles in various educational contexts, including K-12, higher education, and specialized learning programs (Al-Azawei, 2020).

2. Diversity of Educational Settings—Cases were chosen from multiple educational levels and geographical regions to examine how UDL is adapted to different learning environments (Capp, 2019).
3. Empirical Validation—Only case studies published in peer-reviewed journals and supported by empirical evidence were included, ensuring methodological soundness (Rao et al., 2021).
4. Impact on Learning Outcomes—Cases demonstrating measurable improvements in student engagement, accessibility, and academic performance were prioritized (Novak & Rodriguez, 2021).

By following this structured selection process, this study ensures that the case study analysis contributes valuable insights into the challenges, benefits, and best practices of UDL implementation. The integration of qualitative research, systematic literature review, and case study analysis provides a multi-dimensional perspective on UDL's role in fostering inclusive and equitable education.

As a qualitative study, this research is limited by the availability of self-reported data in case studies and the variability of UDL implementation across institutions. Future research should include longitudinal studies to assess UDL's sustained impact on learning outcomes (Rao et al., 2021).

RESULTS AND DISCUSSION

Universal Design for Learning (UDL) has been widely recognized as an effective framework for improving student engagement, academic performance, and accessibility in both K-12 and higher education settings. By offering multiple means of engagement, representation, and action/expression, UDL ensures that students with diverse learning needs can access, process, and express knowledge in ways

that align with their strengths (Al-Azawei, 2020). Research indicates that UDL-based interventions lead to increased motivation, self-efficacy, and academic achievement (Capp, 2019).

A meta-analysis conducted by Rao et al. (2021) found that UDL improves student retention rates, enhances comprehension, and fosters active participation in learning environments. In particular, courses designed with flexible instructional methods, multimedia content, and scaffolded assessments saw significant increases in student performance compared to traditional lecture-based models (Novak & Rodriguez, 2021). Similarly, a longitudinal study by Lombardi et al. (2021) found that UDL implementation in inclusive classrooms led to increased engagement among students with disabilities and English language learners, demonstrating its broad applicability.

The effectiveness of UDL in online learning environments has also been documented. Tobin and Behling (2018) reported that courses incorporating captioned videos, interactive content, and alternative assessment formats resulted in higher student satisfaction and lower dropout rates. Basham et al. (2020) further noted that UDL improves digital accessibility, ensuring that students with visual, auditory, or cognitive disabilities have equitable access to course materials.

Despite its proven effectiveness, UDL adoption remains inconsistent, largely due to institutional challenges, lack of faculty training, and insufficient policy support (Al-Azawei, 2020). These barriers must be addressed to ensure widespread and sustainable UDL implementation across educational settings.

Although UDL has demonstrated significant benefits, its implementation presents challenges related to faculty preparedness, resource availability, and institutional support.

Research suggests that many educators lack the necessary training and pedagogical knowledge to effectively integrate UDL principles into their teaching practices (Lombardi et al., 2021). A study by Smith et al. (2020) found that only 35% of higher education faculty members felt confident in applying UDL, highlighting the need for professional development and instructional support.

Limited institutional resources also hinder UDL adoption. Many educators report that developing UDL-compliant curricula requires additional time, technological tools, and institutional investment (Rao et al., 2020). In schools where faculty members are already overburdened, the perceived workload associated with UDL implementation often prevents widespread adoption (Novak & Rodriguez, 2021).

Another challenge is the lack of standardized assessment tools to measure UDL's impact. While numerous case studies document positive learning outcomes, researchers emphasize the need for longitudinal studies and controlled trials to establish a standardized framework for evaluating UDL's effectiveness (Capp, 2019).

At the policy level, many educational institutions have yet to fully integrate UDL into their curriculum development and accreditation processes. Basham et al. (2020) argue that without clear institutional policies and incentives, UDL implementation will remain fragmented and inconsistent across different learning environments.

Several case studies illustrate effective UDL implementation strategies, providing valuable insights into best practices for overcoming challenges and ensuring sustainable adoption.

1. University of Washington's DO-IT Program (Higher Education, STEM Fields)

The Disabilities, Opportunities, Internetworking, and Technology (DO-IT) Center at the University of Washington has successfully integrated UDL principles into STEM education. By offering adaptive learning environments, assistive technologies, and faculty training programs, the initiative has resulted in higher participation and completion rates for students with disabilities (Burgstahler, 2021).

2. University of New Hampshire's UDL Redesign Initiative (Higher Education, Course Design)

Faculty at the University of New Hampshire collaborated with the Institute on Disability to redesign traditional courses using UDL principles. The initiative involved embedding flexible instructional strategies, interactive learning modules, and alternative assessment formats. Post-implementation evaluations indicated that students perceived the redesigned courses as more engaging and inclusive (Davies et al., 2020).

3. Bartholomew Consolidated School Corporation (K-12, Inclusive Education)

Bartholomew Consolidated School Corporation (BCSC) in Indiana was one of the first districts to implement UDL at a system-wide level. The initiative focused on multi-modal instruction, differentiated learning pathways, and inclusive classroom environments. Over five years, BCSC reported higher graduation rates, reduced dropout rates, and increased student engagement (Meo, 2020).

4. Tech Kids Unlimited (Neurodivergent Students, Technology Education)

Tech Kids Unlimited (TKU) applies UDL principles to teach technology and computational thinking to students with Autism Spectrum Disorder and other learning challenges. By using project-based learning, small-group instruction, and assistive technology, TKU has increased student participation and technical proficiency, highlighting

UDL's potential in specialized educational programs (Black & Moore, 2019).

5. Cranfield School of Management's Role-Playing Game (Experiential Learning, Higher Education)

Cranfield School of Management developed a role-playing board game to help students explore sustainability concepts through UDL-driven experiential learning. Over 2,500 students participated, and evaluations showed that the game enhanced critical thinking, collaboration, and decision-making skills (Watson & Watson, 2018).

6. Wisconsin Collaboratory for Enhanced Learning (WisCEL) (Active Learning, Higher Education)

WisCEL promotes non-traditional instructional models through flipped classrooms, problem-based learning, and technology-enhanced collaboration. Research indicates that students in WisCEL courses consistently perform better in assessments and report higher levels of engagement than those in traditional lecture-based courses (Smith & Lowrey, 2020).

By examining these successful implementations, it is clear that UDL adoption is most effective when combined with faculty training, institutional support, and adaptable learning technologies.

RECOMMENDATIONS

To effectively integrate Universal Design for Learning (UDL) into instructional practices, educators must adopt flexible teaching strategies that cater to diverse learning needs. Research suggests that active learning techniques, multimodal instruction, and formative assessments enhance student engagement and comprehension in UDL-based classrooms (Novak & Rodriguez, 2021).

One of the most effective strategies is incorporating multiple means of engagement by offering students choices in assignments, collaborative projects, and real-world applications. Studies have demonstrated that student autonomy in learning tasks enhances motivation and self-regulation (Rao et al., 2021). Additionally, leveraging multimodal instructional methods—such as combining visual, auditory, and kinesthetic learning activities—improves knowledge retention and comprehension (Capp, 2019).

Educators should also implement scaffolding techniques to support learners at different proficiency levels. Research by Smith and Lowrey (2020) highlights that gradual release models and differentiated instruction allow students to progress at their own pace, reducing cognitive overload and increasing accessibility. Moreover, technology-enhanced learning, including adaptive learning platforms and assistive technologies, can further personalize instruction to meet individual student needs (Basham et al., 2020).

Professional development plays a crucial role in empowering educators to implement UDL effectively. Training programs should focus on practical applications of UDL, curriculum design, and classroom-based interventions. A study by Lombardi et al. (2021) found that educators who received structured UDL training demonstrated higher confidence in integrating inclusive teaching strategies compared to those with no formal training.

Institutional leadership is fundamental to ensuring the sustainable adoption of UDL across educational settings. Administrators must provide systemic support through curriculum redesign, faculty training, and resource allocation (Capp, 2019). A critical first step is embedding UDL principles into institutional policies to create standardized guidelines for inclusive pedagogy (Al-Azawei, 2020).

One of the key challenges in implementing UDL is the lack of institutional resources and support structures. Rao et al. (2021) emphasize the need for dedicated funding for UDL-based initiatives, professional development workshops, and technology integration. Schools and universities should also foster interdisciplinary collaboration, where faculty members, instructional designers, and disability support specialists work together to develop inclusive curricula (Novak & Rodriguez, 2021).

Another essential strategy is data-driven decision-making. Administrators should regularly assess the impact of UDL interventions by collecting student performance data, faculty feedback, and accessibility audits (Basham et al., 2020). Implementing continuous improvement models based on this data ensures ongoing refinements to UDL implementation strategies.

At the policy level, governments and education agencies must integrate UDL into national and regional education frameworks to promote system-wide inclusion (Capp, 2019). Legislation that mandates UDL-informed curriculum development, teacher training, and accessibility standards can significantly enhance equitable learning opportunities (Al-Azawei, 2020).

Policies should focus on three main areas:

1. **Teacher Preparation and Certification**—Requiring pre-service and in-service training on UDL principles ensures that educators are well-equipped to apply inclusive teaching strategies (Smith & Lowrey, 2020).
2. **Funding and Resource Allocation**—Government initiatives should allocate funding to support schools in developing UDL-aligned materials, assistive technologies, and professional training programs (Lombardi et al., 2021).

3. Standardized Assessment and Accountability Measures — Policymakers should develop assessment frameworks that evaluate institutional compliance with UDL principles to ensure consistency across education systems (Basham et al., 2020).

By embedding UDL principles into education policy, policymakers can create more equitable and accessible learning environments that benefit all students, regardless of ability, background, or learning preference.

CONCLUSION

This study examined Universal Design for Learning (UDL) as a transformative framework for fostering inclusive education. The findings highlight that UDL significantly enhances student engagement, learning outcomes, and accessibility by providing multiple means of engagement, representation, and expression (Novak & Rodriguez, 2021). Empirical research demonstrates that UDL-based instructional strategies improve student motivation, knowledge retention, and overall academic performance (Capp, 2019).

Despite these benefits, several challenges hinder the widespread adoption of UDL, including teacher preparedness, limited institutional resources, and the absence of standardized assessment tools (Rao et al., 2021). Addressing these barriers requires collaborative efforts from educators, administrators, and policymakers to establish sustainable UDL integration in diverse educational settings.

While this study provides a comprehensive overview of UDL's theoretical foundations and practical applications, several areas require further investigation. One key research gap is the need for longitudinal studies to assess the long-term impact of UDL on student outcomes (Lombardi et al.,

2021). Future research should also explore how UDL intersects with emerging educational technologies, such as artificial intelligence-driven adaptive learning platforms (Basham et al., 2020).

Additionally, cross-cultural studies are needed to understand how UDL is implemented in non-Western educational systems. Current research predominantly focuses on North American and European institutions, highlighting the need for global perspectives on inclusive education (Al-Azawei, 2020).

To fully realize the potential of UDL, stakeholders across the education sector must commit to its systemic adoption. Educators should prioritize flexible instructional strategies, administrators must embed UDL into institutional policies, and policymakers need to mandate inclusive education standards at national and regional levels (Capp, 2019).

The shift towards UDL-based education is not merely a pedagogical choice—it is an ethical imperative that ensures equity, accessibility, and opportunity for all learners. The time for action is now, and through collective efforts, UDL can reshape the educational landscape for future generations.

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