



TECHNICAL UNIVERSITY OF MOLDOVA

JOURNAL OF SOCIAL SCIENCES

Scientific publication founded on June 1, 2018

2023

Vol. VI (3)

ISSN 2587-3490
eISSN 2587-3504

TECHNICAL UNIVERSITY OF MOLDOVA (PUBLISHING HOUSE)
„TEHNICA UTM” (PRINTING HOUSE)

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[https://doi.org/10.52326/jss.utm.2023.6\(3\).01339.9:336.7\(470+477\)2020/2023](https://doi.org/10.52326/jss.utm.2023.6(3).01339.9:336.7(470+477)2020/2023)



EMERGING MARKETS ECONOMIES SENSITIVITY TO US DOLLAR'S STRENGTH DURING RUSSIA-UKRAINE WAR

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Received: 08. 24. 2023

Accepted: 09. 18. 2023

Abstract. This paper aims to study the sensitivity of emerging markets economies (EMEs) to the US Dollar's strength during the Russian-Ukrainian war in the long and the short run, where Autoregressive distributed lag model (ARDL) was used to analyze time series daily data in the period 2020-2023. We studied the impact of the US Dollar's strength on EMEs asset prices: EMEs currencies, EMEs bonds (US Dollar-denominated) and EMEs stocks, including the factor of the Russian-Ukrainian war as a dummy variable, as well as the effects of various economic factors: Federal Funds Rate, the US 10-year bond yield, commodity prices index and gold prices. The results showed that Russian-Ukrainian war has a significant positive impact on US Dollar's strength. In the other hand, both of them have significant negative impacts on EMEs asset prices, with varying degrees, where the aforementioned economic factors have asymmetric impacts. Moreover, EMEs stocks were the most Sensitive to Russian-Ukrainian war, US Dollar's strength and commodity prices, meanwhile EMEs bonds market were the least Sensitive.

Keywords: *ARDL model, asset prices, emerging market economy, russia-ukraine war, us dollar strength.*

Rezumat. Lucrarea își propune să studieze sensibilitatea economiilor de piață emergente (EME) la puterea dolarului american în timpul războiului ruso-ucrainean pe termen lung și scurt, în care modelul de întârziere distribuit autoregressiv (ARDL) a fost utilizat pentru a analiza datele zilnice ale seriilor de timp în perioada 2020-2023. A fost studiat impactul forței dolarului american asupra prețurilor activelor EME: valute EME, obligațiuni EME (denominate în dolari SUA) și acțiuni EME, inclusiv factorul războiului ruso-ucrainean ca variabilă inactivă, precum și efectele diferitor factori economici: rata fondurilor federale, randamentul obligațiunilor americane pe 10 ani, indicele prețurilor mărfurilor și prețul aurului. Rezultatele au arătat că războiul ruso-ucrainean are un impact pozitiv semnificativ asupra puterii dolarului american. Pe de altă parte, ambele au un impact negativ semnificativ asupra prețurilor activelor EME, cu grade diferite, acolo unde factorii economici menționați mai sus au impacturi asimetrice. Mai mult, acțiunile EME au fost cele mai sensibile la războiul ruso-ucrainean, la puterea dolarului american și la prețurile mărfurilor, în timp ce piața de obligațiuni din EME a fost cea mai puțin sensibilă.

Cuvinte cheie: *model ardl, prețuri ale activelor, economie de piață emergentă, războiul ruso-ucrainean, puterea dolarului american.*

1. Introduction

Due to Covid-19 pandemic lockdown restrictions, the global economy has faced massive economic crisis. By the beginning of 2022, the mortality and infections rates have decreased, which led to cancel the pandemic restrictions by most of countries. Thus, the global economy finally started to recover from covid-19 pandemic and there were optimistic predictions for global growth according to the IMF World Economic Outlook. In February of 2022, Russia invaded Ukraine, which raised questions about the impact of the conflict on the world's political and economic order and dimmed all hopes for global growth [1, 2].

The conflict started when Ukraine declared its attention to join NATO, which created a threat to Russia. According to U.S. Department of State Antony Blinken, Russia “continues to take aim at NATO, a defensive, voluntary alliance that protects nearly a billion people across Europe and North America, and at the governing principles of international peace and security that we all have a stake in defending” [3].

The invasion caused massive economical, geopolitical, and humanitarian crisis. According to United Nations High Commissioner for Refugees (UNHCR), more than eight million Ukrainian refugees recorded across Europe, and over eight million others displaced within the country. Moreover, the war led to a mixture of repercussions on the global economy with significant impacts on: the commodity markets, trade, financial flows, Refugees problems and market confidence [4].

Therefore, investors fear and uncertainty related to financial markets risks and volatility have increased due to geopolitical tension. In addition, global economy was primarily impacted by the sharp increase in prices of commodities that are provided by Russia and Ukraine such as energy, wheat, fertilizers and some minerals. The war also intensified price rise pressures of foods that were already piling from the Covid-19 pandemic crisis and worsened poverty rates, food insecurity in several countries [5].

The value of global currencies was significantly depreciated due to the Russia-Ukraine war especially the Russian Ruble [6]. Since the US Dollar is considered as the most dominant currency in international transactions and foreign lending, any fluctuations in its value will negatively affect emerging market economies, as cross-border loans represent about 50% of all external liabilities of emerging market countries according to the International Monetary Fund (IMF) and U.S. dollars represent 80% of these loans [7]. In addition, the US dollar Strength leads to a significant contraction in real investment in emerging markets, especially countries with a floating exchange rate regime. There is a negative relationship between emerging markets GDP growth and the US dollar strength, any rise in US Dollar value will lead to falling of US Dollar priced commodities, and weak commodity prices lead to lower real incomes, which reduces domestic demand and real GDP growth in emerging markets [8, 9].

Thus, the US Dollar is widely acknowledged as the primary currency for global reserve, international trade, investment, and global financial flows. As such, US Dollar's strength has negative effect on GDP, investment, financial sector and sovereign risk in emerging markets economies [10].

Given the importance to understanding the impact of geopolitical uncertainty (Russian-Ukraine War) on emerging market economies (EME) and the US dollar, this study aims to examine the reaction of the US Dollar Strength to the Russian-Ukraine war and how they affect EMEs asset prices: EMEs currencies, EMEs bonds (US Dollar-denominated) and

EMEs stocks, including the role of various economic factors such as: commodity prices, gold prices, Federal Funds Rate and the US 10-year bond yield, in the long and the short run.

The paper is organized as follows: The second section devoted to literature review, the third section explains the methodologies used, dataset and auxiliary calculations, whereas the fourth section provides the discussion of the econometric results and the final section is the Conclusion.

2. Literature Review:

In term of international finance, it has been conducted a great deal of research on emerging market economies, particularly in regards to how are these markets vulnerable to shocks from the outside world, such as uncertainty related to US economy behavior and global geopolitical conflicts. According to [11], when economic uncertainty in the US increases, GDP drops globally along with it. Furthermore, there is a significant portion of the activity reduction in advanced nations caused by the exchange rate system and financial instability, however, the reactions are higher in EMEs countries when trade openness and financial system instability are both high and are unaffected by the exchange rate regime.

The study of [12], displayed in their study that while individual components' effects vary depending on the market categorization, the overall political risk factor has an impact on stock returns in established, developing, and frontier economies. Government action is a substantial source of political risk that is common to all three market groups; the main distinction is the possibility of war as shown in ethnic tensions, government stability is the final factor that makes frontier stock markets particularly vulnerable to political risk. The study performed by [13], demonstrate that shocks to global geopolitical risk have a significant impact on the business cycle for emerging economies. These shocks are connected to significant economic contractions, between 13% and 22% of output volatility is often accounted by global geopolitical risk shocks. However, the specific share for each EMEs country varies greatly.

The Russia-Ukraine War is considered as the most recent geopolitical risk that led to major global Consequences, where it has resulted a massive humanitarian loss, opportunity cost of military investment and a disruption of local and global economies [14]. The war has also added more worries about a significant slowdown in global growth, an increase in prices and debts and a rise in poverty. Additionally, there were economic influences on financial markets, trade, migration and investment confidence; through three primary channels: an increase in commodity prices, financial sanctions and supply chains interruptions [15]. In his study, [16] showed that between February and August 2022, imports from Ukraine became 47.3% less than the usual, and the trade rerouting caused by the Russia-Ukraine conflict benefited Russian exports of mineral oil and gas to Europe and Asia more than any other country. Furthermore, he demonstrated the existence of a significant variation among product groups and geographic regions, and that the trade adjustments mostly occur through increases in import prices.

Nations that depend on food imports from Russia and Ukraine, especially those in the Middle East and North Africa (MENA) area, were particularly affected by the war's immediate and extensive cascading effect on global food security. In addition, the timing of the war was unfortunate for the world's food markets as they already had high food prices due to supply chain disruptions brought on by the COVID-19 pandemic, high global demand and poor harvests in certain areas [17, 18]. The crisis's detrimental impacts are proven with more than

27 million people being driven into poverty and extra 22 million people into hunger, while increased food costs have a greater impact on hunger and food quality, furthermore, increasing energy and fertilizer prices have a greater impact on agricultural industries and poverty [19].

The study conducted by [20], suggested that the volatility of the agricultural, metal, and energy markets is greatly increased by the escalation of the Russia-Ukraine conflict. The conflict has an impact on these markets through both economic and financial channels, the higher the global market share of Russia exported commodities, the higher volatility of commodity markets. According to [21], commodity prices have a significant impact on stock markets all over the world, their change can be considered as the biggest since the 2008 financial crisis, which directly affected the gold and oil markets and stronger trade ties with Russia and Ukraine led to more decrease in the stock market value indexes [22]. But, according to [23] though the Russian-Ukrainian war impact was smaller than Global Financial Crisis (GFC) and the Covid-19, the immediate response of the world stock markets demonstrates that investors perceived the invasion as bigger news.

The studies of [24, 25], discovered the existence of a considerable negative impact of war on most stock markets as they became inefficient, particularly on the Russian market, where the conflict has a large negative impact on the G20's European and Asian regions. The stock markets return in invasion day are adversely correlated with economic globalization as measured by GDP-scaled commerce, where the war impact was greater on more globalized economies [26].

The study performed by [27], look for how the Russia-Ukraine war affected the topological characteristics of the global bond market, they found that the war has a significant impact on developed and developing economies government bonds markets. While utilizing the Euro as the official currency, the networks of relationships between the markets for EU government bonds are intimately linked to one another. Additionally, the effects of the Russia-Ukraine conflict on foreign exchange rates using five different Euro exchange rates, their findings showed that the Russian Ruble had a significant impact on the devaluation of the Euro. In addition, all of the foreign exchange rates showed a long-run cointegration, only the relationships between Euro against Russian Ruble, US Dollar and Chinese Yuan were significant in the short run [28].

The study conducted by [29], examined how the Russian invasion of Ukraine affected various asset classes' hedging capabilities, they found that the different asset classes displayed varied levels of risk sensitivity, in terms of both size and timescale. For multi-week timeframes, bonds and stocks showed high coherence, although, currencies were affected in shorter time frames. The assets that held their value the longest against changes in the war geopolitical risk, included: real estate, gold, silver, Swiss francs, and green bonds; therefore, they may be the best protection against geopolitical risk.

To the best of our knowledge, no study has covered the impact of the Russia-Ukraine war on US Dollar's strength, while most of previous studies have examined its impact either on global asset prices or on EMEs asset prices individually. This study aims to fill this gap by analyzing the impact of the Russia-Ukraine war on both US Dollar's strength and EMEs asset prices: EMEs currencies, EMEs bonds (US Dollar-denominated) and EMEs stocks; as well as finding which of these EMEs asset prices are more sensitive to US Dollar strength and the Russia-Ukraine war, in the long-run and the short-run. Therefore, the study depended on explanatory variables such as: Federal funds rate and the US 10-year bond yield due to

significant effects of US quantitative easing on EMEs [30], commodity prices index since Russia and Ukraine are considered as major commodities exporters [31], gold prices because gold is commonly recognized as a safeguard against US Dollar fluctuations and it is proven to be more stable than the US Dollar during global economy uncertainty [32].

3. Methodology

This section presents the data collected and the econometric model of the study estimated using Auto Regressive Distributed Lag (ARDL) approach.

3.1 Data

This study used daily data of EMEs assets prices indexes, US Dollar Index, Federal Funds Rate and the US 10-year bond yield, commodity prices, gold prices, collected from investing.com website, besides the Russian-Ukrainian war factor as a dummy variable, in the period between 02 January 2020 and 01 June 2023 with 861 Observations, as displayed in Table 1 and 2.

Table 1

Variables description	
variable	index
US Dollar's strength	US Dollar Index
EMEs currencies	MSCI Intl Emerging Market Currency
EMEs bonds	iShares J.P. Morgan USD Emerging Markets Bond ETF
EMEs stokes	MSCI Emerging Markets (MSCIEF)
US Federal funds	Federal Funds Rate
US bonds	US 10-Year Bond Yield
Commodity prices	Bloomberg Commodity (BCOM)
Gold prices	Gold futures

Source: Research Findings.

Table 2

Descriptive statistics				
Variable	Max	Min	Mean	St. Dev
US Dollar's strength	114.11	89.44	97.92	6.04
EMEs currencies	1755.59	1547.33	1675.53	54.96
EMEs bonds	117.01	77.09	102.16	11.91
EMEs stocks	1444.93	758.2	1123.2	158.93
US Federal funds	5.08	0.04	1.03	1.51
US bonds	4.25	0.52	1.91	1.08
Commodity prices	136.6	59.47	94.89	20.68
Gold	2069.4	1477.9	1804.33	104.08

Source: Research Findings.

3.2. Econometric Modeling

This study employs Auto Regressive Distributed Lag (ARDL) model [33] to examine long-run cointegration correlations between the model variables and to detect the short-run dynamic by removing features from the error correction model (ECM). Eq. (1), Eq. (2), Eq. (3) and Eq. (4) represent the ARDL models:

$$\Delta DS_t = \alpha_0 + \sum_{i=1}^p \beta_{1i} \Delta DS_{t-i} + \sum_{i=1}^p \beta_{2i} \Delta F_{t-i} + \sum_{i=1}^p \beta_{3i} \Delta Y_{t-i} + \sum_{i=1}^p \beta_{4i} \Delta CP_{t-i} + \sum_{i=1}^p \beta_{5i} \Delta G_{t-i} + \sum_{i=1}^p \beta_{6i} \Delta RUW_{t-i} + \delta_1 DS_{t-1} + \delta_1 F_{t-1} + \delta_1 Y_{t-1} + \delta_1 CP_{t-1} + \delta_1 G_{t-1} + \delta_1 RUW_{t-1} + \varepsilon_t \quad (1)$$

$$\Delta EMC_t = \alpha_0 + \sum_{i=1}^p \beta_{1i} \Delta EMC_{t-i} + \sum_{i=1}^p \beta_{2i} \Delta DS_{t-i} + \sum_{i=1}^p \beta_{3i} \Delta F_{t-i} + \sum_{i=1}^p \beta_{4i} \Delta Y_{t-i} + \sum_{i=1}^p \beta_{5i} \Delta CP_{t-i} + \sum_{i=1}^p \beta_{6i} \Delta G_{t-i} + \sum_{i=1}^p \beta_{7i} \Delta RUW_{t-i} + \delta_1 EMC_{t-1} + \delta_2 DS_{t-1} + \delta_3 F_{t-1} + \delta_4 Y_{t-1} + \delta_5 CP_{t-1} + \delta_6 G_{t-1} + \delta_7 RUW_{t-1} + \varepsilon_t \quad (2)$$

$$\Delta EMB_t = \alpha_0 + \sum_{i=1}^p \beta_{1i} \Delta EMB_{t-i} + \sum_{i=1}^p \beta_{2i} \Delta DS_{t-i} + \sum_{i=1}^p \beta_{3i} \Delta F_{t-i} + \sum_{i=1}^p \beta_{4i} \Delta Y_{t-i} + \sum_{i=1}^p \beta_{5i} \Delta CP_{t-i} + \sum_{i=1}^p \beta_{6i} \Delta G_{t-i} + \sum_{i=1}^p \beta_{7i} \Delta RUW_{t-i} + \delta_1 EMB_{t-1} + \delta_2 DS_{t-1} + \delta_3 F_{t-1} + \delta_4 Y_{t-1} + \delta_5 CP_{t-1} + \delta_6 G_{t-1} + \delta_7 RUW_{t-1} + \varepsilon_t \quad (3)$$

$$\Delta EMS_t = \alpha_0 + \sum_{i=1}^p \beta_{1i} \Delta EMS_{t-i} + \sum_{i=1}^p \beta_{2i} \Delta DS_{t-i} + \sum_{i=1}^p \beta_{3i} \Delta F_{t-i} + \sum_{i=1}^p \beta_{4i} \Delta Y_{t-i} + \sum_{i=1}^p \beta_{5i} \Delta CP_{t-i} + \sum_{i=1}^p \beta_{6i} \Delta G_{t-i} + \sum_{i=1}^p \beta_{7i} \Delta RUW_{t-i} + \delta_1 EMS_{t-1} + \delta_2 DS_{t-1} + \delta_3 F_{t-1} + \delta_4 Y_{t-1} + \delta_5 CP_{t-1} + \delta_6 G_{t-1} + \delta_7 RUW_{t-1} + \varepsilon_t \quad (4)$$

Where: Δ : the first-order differential operator, α_0 : constant, p : number of lags, $\beta_1 + \beta_2 + \dots + \beta_5$: the short-run dynamics, $\delta_1 + \delta_2 + \dots + \delta_5$: the long-run dynamics, p : the number of lags, ε_t : the standard error term, DS: US Dollar's strength, EMC: EMEs currencies, EMB: EMEs bonds, EMS: EMEs stocks, F: Federal Funds Rate, Y: US 10-Year bond yield, CP: Commodity prices, G: Gold prices and RUW: Russian-Ukrainian war.

The ARDL bound test [34] approach was applied to investigate co-integration between the variables by comparing the F-statistic to the critical bound values, Depending on the following hypotheses:

H0: There is no co-integration ($\delta_1 = \delta_2 = \delta_3 = \delta_4 = \delta_5 = \delta_6 = 0$)

H1: There is a co-integration ($\delta_1 \neq \delta_2 \neq \delta_3 \neq \delta_4 \neq \delta_5 \neq \delta_6 \neq 0$)

The null hypothesis of no co-integration will be rejected if the estimated F-statistics is greater than the two sets of higher critical values, which are divided into upper critical value[I(1)] and lower critical value[I(0)]. If not, it will be accepted.

Then, cumulative sum of the residuals (CUSUM) and cumulative sum of squares of residuals (CUSUMQ) tests [35] were used to evaluate the parameter stability and verify the quality of fit of the ARDL model. Furthermore, Toda and Yamamoto test (Granger causality/block erogeneity Wald test) [36] was used to examine the causative relationship among the variables, which applies

a Vector Auto-Regression (VAR) approach at the level and adds the maximum integration order(m) of all the model's variables to the appropriate VAR order (k). As shown in Eq. (5) and Eq. (6) below:

$$Y_t = \alpha_1 + \sum_{i=1}^m \beta_{1i} Y_{t-i} + \sum_{i=1}^k \beta_{2i} Y_{t-i} + \sum_{i=1}^m \theta_{1i} X_{t-i} + \sum_{i=1}^k \theta_{2i} X_{t-i} + \mu_t \quad (5)$$

$$X_t = \alpha_2 + \sum_{i=1}^m \theta_{1i} X_{t-i} + \sum_{i=1}^k \theta_{2i} X_{t-i} + \sum_{i=1}^m \gamma_{1i} Y_{t-i} + \sum_{i=1}^k \gamma_{2i} Y_{t-i} + \mu_t \quad (6)$$

Where: Y : the dependent variable, X : independent variable, α_1 and α_2 : constant, $\theta_1, \theta_2, \gamma_1$ and γ_2 : the short-run dynamics and μ_t : the white error term.

4. Results and Discussion

This section covers the main findings of the Auto Regressive Distributed Lag (ARDL) modeling procedures.

4.1. Stationarity test

Table 3 finding shows that all variables are stationary in the first difference (level of significance of 1%), except for G and Y that are stationary in the level (level of significance of 5% and 10% respectively), which means rejecting the null hypothesis (unit root) [37], which confirms suitability of the ARDL model for the study.

Table 3

Unit root test results

Variable	Level			First difference		
	T&I	Intercept	None	T&I	Intercept	None
DS	-1.57032	-1.08497	0.23542	-26.9910***	-27.0057***	-27.0194***
EMC	-1.259201	-1.181657	0.205789	-27.1881***	-27.2046***	-27.2188***
EMB	-2.134774	-1.196146	-1.035634	-9.47278***	-9.47693***	-9.43482***
EME	-1.204737	-1.064944	-0.489872	-26.2773***	-26.2837***	-26.2966***
F	-1.181327	1.708958	2.346977	-29.2181***	-28.7188***	-28.6399***
Y	-3.325920*	-0.230876	0.644602	-28.3152***	-28.2690***	-28.2577***
P	-1.697057	-0.845783	0.583883	-26.2125***	-26.2285***	-26.2270***
G	-3.002485	-2.91220**	0.737549	-28.8332***	-28.8513***	-28.8424***

Note: T&I: Trend and Intercept; ***, **, and *: the level of significance of 1%, 5% and 10% respectively.

4.2. Co-integration test

Table 4 presents the co-integration of long-run relationship according to [34] bounds co-integration test, the results reject the null hypothesis and show a co-integration of all variables at the 1% level.

Table 4

ARDL bounds test

Variable	F-statistic	Significance	I0 Bound	I1 Bound
ΔDS	120.7815***	10%	2.08	3
		05%	2.39	3.38
		01%	3.06	4.15
ΔEMC	140.3527***	10%	1.92	2.89
		05%	2.17	3.21
		01%	2.73	3.9
ΔEMB	142.9297***	10%	1.99	2.94
		05%	2.27	3.28
		01%	2.88	3.99

Continuation Table 4

ΔEMS	48.89799***	10%	1.99	2.94
		05%	2.27	3.28
		01%	2.88	3.99

Note: ***, **, and *: the level of significance of 1%, 5% and 10% respectively.

4.3. ARDL model findings

Table 5 presents the long-run regression results of the ARDL model, where Table 6 summarizes the short-run. The R-squared shows that the model explains 60.7%, 60.1%, 61.7% and 57.1% of the variables: US Dollar strength, EMEs currencies, EMEs bonds and EMEs stocks respectively.

Table 5

Variables	ARDL Long-run coefficients			
	ΔDS	ΔEMC	ΔEMB	ΔEMS
DS		-0.003200 [-0.061566]	0.023930** [2.134471]	0.073740 [0.425205]
F	0.010410 [0.650275]	0.007726 [0.032486]	-0.120921** [-2.356957]	-1.416031* [-1.780119]
Y	-0.075856 [-1.458811]	0.567415 [1.036976]	0.295236** [2.495640]	3.547210* [1.946501]
P	0.003521 [1.602232]	-0.010590 [-0.596087]	-0.008532** [-2.221376]	-0.143791** [-2.429050]
G	-0.000203 [-1.185119]	0.004140** [2.339633]	0.001089*** [2.874681]	0.011371* [1.930268]
RUW	0.016196 [0.207974]	-1.182855 [-1.330500]	-0.322986* [-1.663860]	-0.643043 [-0.213204]
C	154.5688*** [13.01483]	-6.806157 [-0.899146]	-3.857267** [-2.366948]	-19.34095 [-0.766260]

Note: []: t-Statistic; ***, **, and *: the level of significance of 1%, 5% and 10% respectively, Δ: the first-order differential operator, DS: US Dollar's strength, EMC: EMEs currencies, EMB: EMEs bonds, EMS: EMEs stocks, F: Federal Funds Rate, Y: US 10-Year bond yield, CP: Commodity prices, G: Gold prices and RUW: Russian-Ukrainian war.

The results show that the Russia-Ukraine war has a negative significant long-run impact on EMEs bonds with -0.32 coefficient (5% level of significance), in addition, EMEs currencies, EMEs bonds and EMEs stocks are all negatively impacted by the Russia-Ukraine war in the short-run with coefficients of: -12.01 and, -1.585, -45.31 respectively, this supports the results of previous literatures [24-28]. Where Dollar's strength was positively impacted with 1.127 coefficient.

EMEs bonds was positively impacted by US Dollar's strength in the long-run, which confirms [38] finding. In line with pre-war studies [10, 39], US Dollar's strength has a negative short-run impact on EMEs assets prices, implying that one (1) unit increase in US Dollar index will reduce EMEs bonds by -0.393721 in the short-run and rise it by 0.023 in the long-run. Moreover, in the short-run will reduce EMEs currencies and EMEs stocks by -3.78 and -6.47 respectively.

US 10-year bond yield has a positive significant impact on EMEs bonds in the long-run which means that the continuity in US Dollar's strength and US 10-year bond yield rise, led

to increase in EMEs bonds. Meanwhile, in the short-run EMEs Bond was negatively impacted by US 10-year bond yield, similar to [40] pre-war study, on the contrary, EMEs currencies, EMEs stocks and US Dollar's strength was positively impacted by US 10-year bond yield.

Federal Funds Rate has a negative long-run impact on EMEs bonds and EMEs stocks moreover, it has a negative impact on EMEs currencies and US Dollar's strength in the short-run, as [30, 41] asserted similar effects in the pre-war period.

The gold prices have a positive impact on EMEs asset prices in the long-run, which clarifies the asymmetric impact of gold prices on EMEs stocks [42]. Moreover, the gold prices have a negative short-run impact on US Dollar's strength, same as [43], and positive impact on EMEs bonds.

Commodity prices have a negative impact on US Dollar's strength, same as the pre-war [44] finding, while they have a positive impact on EMEs asset prices in the short-run, in addition, they have a negative impact on EMEs bonds and EMEs stocks in the long-run.

Overall, EMEs stocks were more impacted by the Russia-Ukraine war than EMEs currencies and EMEs bonds respectively, which contradicts [29] study results. Same as for US Dollar's strength and commodity prices, where they have more impact on EMEs stocks than EMEs currencies and EMEs bonds respectively.

Table 6

ARDL Short-run coefficients				
Variables	ΔDS	ΔEMC	ΔEMB	ΔEMS
ΔDS		-3.784451*** [-12.86990]	-0.393721*** [-5.732936]	-6.472111*** [-6.862521]
$\Delta DS(-1)$	0.974781*** [145.9178]	-3.740072*** [-12.52205]		-5.352578*** [-5.955563]
ΔF	0.622223*** [2.858677]	-0.286398 [-0.153248]	0.552210 [1.363929]	
$\Delta F(-1)$	-0.744575** [-2.465758]	-4.671478** [-2.516459]		
ΔY	1.523571*** [6.107598]	10.65567*** [4.899386]	-3.551244*** [-7.295184]	39.98758*** [5.827321]
$\Delta Y(-1)$	0.763755*** [3.242033]			
ΔP	-0.070464 [-5.173589]	0.600247*** [5.260809]	0.122355*** [4.636605]	2.202177*** [6.029893]
$\Delta P(-1)$	-0.026369** [-2.145286]			
ΔG	-0.006473*** [-7.535253]		0.001383 [0.820450]	
$\Delta G(-1)$			0.003376** [2.326768]	
ΔRUW	0.293697 [0.703404]	-1.636264 [-0.446511]	-1.654087** [-2.081588]	-28.94058** [-2.433979]
$\Delta RUW(-1)$	1.127497*** [2.710611]	-12.31864*** [-3.352066]	-1.585499 ** [-1.993756]	-45.31346*** [-3.802603]
CointEq(-1)	-0.025219*** [-4.860060]	-1.177941*** [-35.45028]	-1.157517*** [-34.10490]	-1.023880*** [-30.54824]
R^2	0.606839	0.601228	0.616797	0.571369

Note: []: t-Statistic; ***, **, and *: the level of significance of 1%, 5% and 10% respectively, Δ : the first-order differential operator, DS: US Dollar's strength, EMC: EMEs currencies, EMB: EMEs bonds, EMS: EMEs stocks, F: Federal Funds Rate, Y: US 10-Year bond yield, CP: Commodity prices, G: Gold prices and RUW: Russian-Ukrainian war.

4.4. The stability tests

Figure 1 and Figure 2 present the CUSUM and CUSUMSQ graphs respectively (by means of 5% critical lines), where these graphs show the stability of the variables across the model period. The CUSUMs all of the US Dollar's strength, EMEs currencies, EMEs bonds and EMEs stocks are contained inside the 5% important critical lines. Although the CUSUMSQ of EMEs bonds and stocks have not been presented throughout the entire model period, The CUSUMSQ graphs for the US Dollar's strength and EMEs currencies are within the 5% significance critical lines. However, according to [45], the stability could be proven at least by either CUSUM or CUSUMSQ, which supports the parameter stability of the model variables.

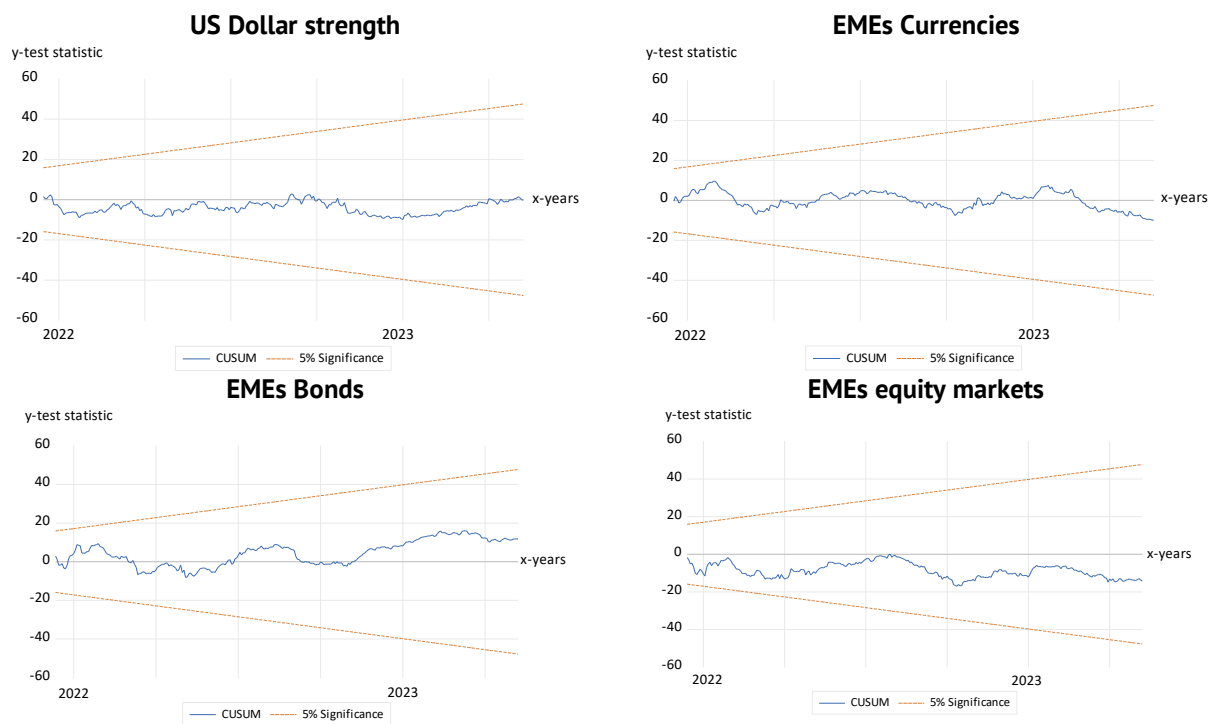
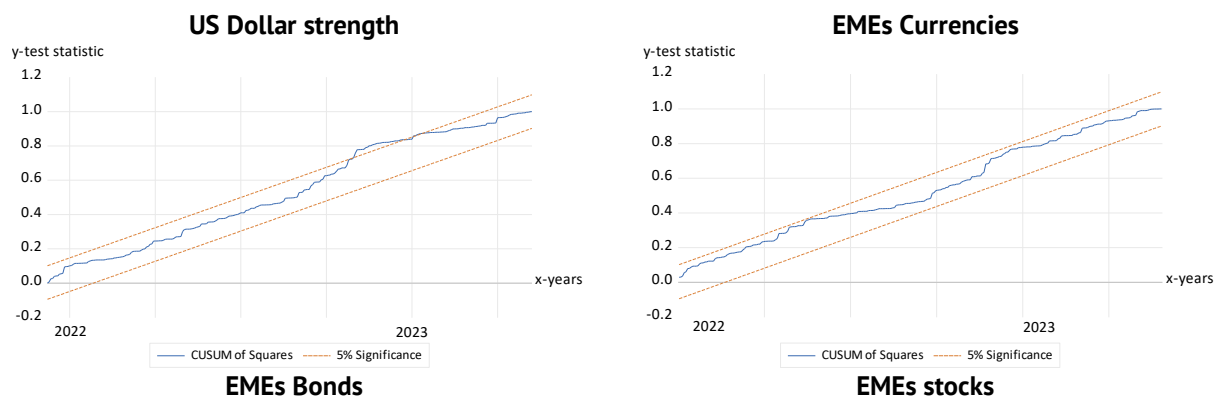


Figure 1. CUSUM test graphs.

Source: Elaborated by the authors depending on EViews 12 outputs.



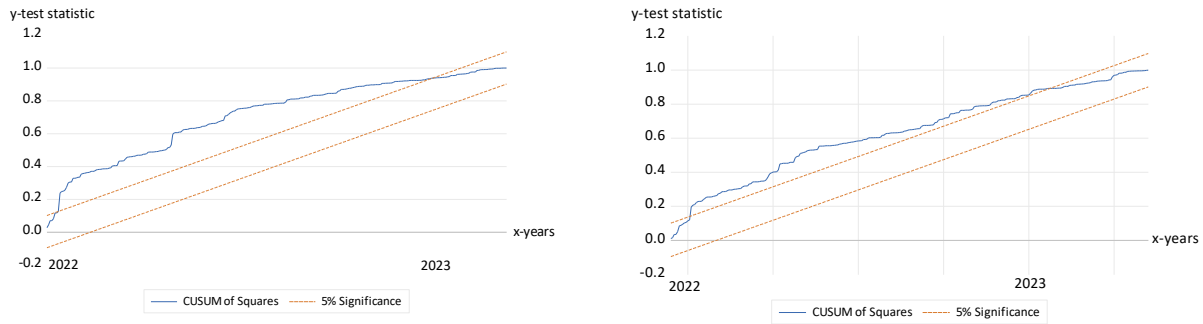


Figure 2. CUSUMSQ test graphs.

Source: Elaborated by the authors depending on EViews 12 outputs.

4.5. Toda and Yamamoto Tests

Table 7 shows the results of Toda and Yamamoto test, where there is unidirectional causality between the Russia-Ukraine war and EMEs currencies, EMEs bonds, EMEs stocks and commodity prices. Moreover, US Dollar's strength has unidirectional causality with EMEs currencies, EMEs stocks, federal funds rate and commodity prices, in addition, it has bidirectional causality with EMEs bonds, US 10-year bond yield and gold prices. Additionally, commodity prices have unidirectional causality with EMEs asset prices, federal funds rate and gold prices, also bidirectional causality with federal funds rate and US 10-year bond yield. There is bidirectional causality between federal funds rate and US 10-year bond yield.

Table 7

Toda and Yamamoto Tests

Variable	DS	EMC	EMB	EME	F	Y	P	G	RUW
DS		0.000***	0.060*	0.000***	0.011**	0.605	0.026**	0.093*	0.636
EMC	0.953		0.656	0.039**	0.607	0.303	0.025**	0.813	0.451
EMB	0.000***	0.000***		0.000***	0.100*	0.000***	0.252	0.010***	0.890
EME	0.450	0.726	0.133		0.550	0.061*	0.056*	0.165	0.508
F	0.893	0.290	0.089*	0.442		0.003***	0.040**	0.963	0.908
Y	0.040***	0.7495	0.001***	0.073*	0.001***		0.007***	0.255	0.318
P	0.289	0.0978*	0.082*	0.810	0.219	0.027**		0.024**	0.705
G	0.025**	0.065*	0.026**	0.298	0.029**	0.148	0.434		0.144
RUW	0.344	0.000***	0.039**	0.001***	0.865	0.898	0.050**	0.187	

Note: ***, **, and *: the level of significance of 1%, 5% and 10% respectively, Δ: the first-order differential operator, DS: US Dollar's strength, EMC: EMEs currencies, EMB: EMEs bonds, EMS: EMEs stocks, F: Federal Funds Rate, Y: US 10-Year bond yield, CP: Commodity prices, G: Gold prices and RUW: Russian-Ukrainian.

5. Conclusions

In order to determine how the Russia-Ukraine war has impacted the US Dollar's strength, and how they both impacted emerging markets economies (EMEs) in the long-run and the short-run. Then, we used Autoregressive Distributed Lag model (ARDL) to analyze the sensitivity of EMEs currencies, EMEs bonds (US Dollar-denominated) and EMEs stocks, to the US Dollar Index and the Russia-Ukraine war, as well the effects of various economic factors: Federal Funds Rate, the US 10-year bond yield, commodity prices index and gold prices

The finding of this study suggests that in the short-run: the Russia-Ukraine war has a negative impact on EMEs asset prices and a positive impact on US Dollar's strength. In addition, EMEs currencies, EMEs bonds and EMEs stocks, are all negatively impacted by US Dollar's strength. US 10-year bond yield has a positive impact on US Dollar's strength, EMEs currencies and EMEs stocks, where it has a negative impact on EMEs bond. Federal funds rate

has a negative impact on US Dollar's strength and EMEs currencies. EMEs asset prices was positively impacted by commodity prices, while US Dollar's strength was negatively impacted. The gold prices have a positive impact on EMEs bonds and a negative impact on US Dollar's strength.

While in the long-run: the Russia-Ukraine war has a negative impact on EMEs bonds. EMEs bonds was positively impacted by US Dollar's strength and US 10-year bond yield, while they are negatively impacted besides EMEs stocks by federal funds rate. Commodity prices have a positive impact on EMEs asset prices, on contrary; they have a negative impact on US Dollar's strength. The gold prices have negative impact on EMEs bonds and EMEs stocks. Moreover, EMEs stocks was more sensitive to the Russia-Ukraine war, US Dollar's strength and commodity prices than EMEs currencies and even more than EMEs bonds.

Overall, these results have significant implications for investors and regulators in emerging markets, where geopolitical conflicts (the Russia-Ukraine war) for example, have an impact on emerging market economies, then, policymakers should be aware of this impact and take the necessary precautions to reduce the risks associated. Investors in emerging markets should also be aware of these risks and should adjust their investment strategies accordingly.

Conflicts of Interest: The authors declare no conflict of interest

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Citation: Mouffok, M. A.; Mouffok, O.; Bouabdallah, W. Emerging markets economies sensitivity to US Dollar's strength during Russian-Ukraine war. *Journal of Social Sciences*. 2023, 6 (3), pp. 6-19. [https://doi.org/10.52326/jss.utm.2023.6\(3\).01](https://doi.org/10.52326/jss.utm.2023.6(3).01).

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Submission of manuscripts:

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[https://doi.org/10.52326/jss.utm.2023.6\(3\).02](https://doi.org/10.52326/jss.utm.2023.6(3).02)
UDC 005.5/.7



STREAMLINING ORGANIZATIONAL MANAGEABILITY THROUGH SCALABLE DECISION MAKING

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Received: 07. 12. 2023

Accepted: 08. 19. 2023

Abstract. In modern organizations, decision-making processes are critical to effectively managing business operations. However, as organizations grow more complex, decision-making becomes more challenging and time-consuming, leading to a lack of agility, bottlenecks and decreased productivity. One of the assumptions in the article is that excessive complexity and uncontrolled secrecy in organizations lead to lack of understanding of how they work. This can be detrimental to decision-making processes, resulting in misinterpretations of data, misunderstandings of organizational objectives and ultimately, poor decision-making and results. These factors can create a wall of ignorance and irresponsibility within organizations. To address this issue, we propose the hypothesis that simplifying decision-making processes and making them more scalable and this will increase employee involvement and trust in the organization. Implementing scalable decision-making processes can create a framework for making consistent decisions across teams and departments, streamline the decision-making process, encourage critical thinking and enable the organization to respond more quickly and rationally to changing market conditions. The conclusion of the article is that applying scalable decision-making in organization can unlock new levels of manageability, improving the ability to make complex decisions and navigate dynamic situations. This model may be applicable to transportation and logistics companies, production units and plants and construction and manufacturing industries seeking to improve their performance and competitiveness in today's fast-paced business environment.

Keywords: *choice-making, flexibility, management, transparency, unknown,*

Rezumat. Procesele de luare a deciziilor în organizațiile moderne sunt esențiale pentru gestionarea eficientă a operațiunilor de afaceri. Cu toate acestea, pe măsură ce organizațiile devin mai complexe, luarea deciziilor devine mai provocatoare și consumatoare de timp, ceea ce duce la o lipsă de agilitate, blocaje și scăderea productivității. Una dintre premisele din articol constă în complexitatea excesivă și secretul necontrolat în organizații, care conduc la o lipsă de înțelegere a modului în care funcționează organizația. Acest lucru poate fi dăunător proceselor de luare a deciziilor, ducând la interpretări greșite ale datelor, neînțelegeri ale obiectivelor organizaționale și, în cele din urmă, luare a deciziilor și rezultate finale slabe.

Acești factori pot crea un zid de ignoranță și iresponsabilitate în cadrul organizațiilor. Pentru a aborda această problemă, propunem ipoteza că simplificarea proceselor de luare a deciziilor și a le face proporționale, coraportate la capacitatea de gestionare a organizației, iar acest lucru va crește implicarea angajaților și încrederea în organizație. Implementarea proceselor de luare a deciziilor proporționale sau scalabile poate crea un cadru pentru luarea deciziilor consecvente între echipe și departamente, eficientiza procesul de luare a deciziilor, încurajează gândirea critică și permite organizației să răspundă mai rapid și mai rațional la condițiile de piață în schimbare. În concluzie, articolul argumentează că aplicarea procesului decizional scalabil poate debloca noi niveluri de gestionare, îmbunătățind capacitatea de a lua decizii complexe și de a naviga în situații dinamice. Acest model poate fi aplicabil companiilor de transport și logistică, unităților și fabricilor de producție, precum și industriilor de construcții și producție care doresc să-și îmbunătățească performanța și competitivitatea în mediul de afaceri cu ritm rapid de astăzi.

Cuvinte-cheie: *alegere, flexibilitate, management, transparență, necunoscut.*

1. Introduction

In this article, we approach manageability from the perspective of scalability as structure and it serves as a continuation of our previous articles [1].

Effective management is essential for organizational success as it leads to increased productivity, efficiency and profitability and good managers have the ability to identify and address problems. This sentence sounds good until problems escalate into crises, when the question of responsibility and guilt arises. However, the usual running of an organization involves navigating perpetual changes and often moving from one crisis to another. Our intention is to stabilize the dynamic functioning of the organization by streamlining manageability through scalable decision-making.

Scalability refers to the ability of an organization to handle increasing amounts of work or users, growing in size and complexity or contraction and diminishment without significantly increasing costs or diminishing performance. Scalability is an important consideration for any organization, especially those that are expected to grow rapidly or face unpredictable levels of demand.

It involves designing and implementing systems, competencies, processes and infrastructure that can adapt to changing needs and accommodate increasing demands without causing disruptions or requiring significant modifications. Scalability is often measured in terms of metrics such as response time, throughput and resource utilization and can be achieved through various strategies such as vertical and horizontal scaling, load balancing and performance tuning.

2. Materials and Methods

In our research investigated elements of manageability from the perspective of scalability are: forecasting, planning, organizing, implementation, controlling, “window of opportunity”, decision making.

Firstly, we will analyze scalability from the view of “knowledge in decision making process” and “stable and known situation” and then from the perspective “unknown in decision making process” and “unstable and with large uncertainty situation” [1, p. 84].

The explicit meanings of the mentioned terms are elucidated in the previously published article [1].

A.1 Manageability as organizational scalability activity in organization from the perspective of “knowledge in decision making process” and “stable and known situation”

We will review some works relevant to this criterion.

André B. Bondi's article "Characteristics of scalability and their impact on performance" [2] explores the concept of scalability in software and how it affects performance. Bondi explains that scalability refers to a software system's ability to handle an increasing workload by adding more resources, such as processors or memory. The article identifies several characteristics of scalability, including linearity, stability, predictability and efficiency. Linearity refers to how the performance of the system changes as the workload increases. Stability refers to how consistent the performance is over time. Predictability refers to how accurately the system can predict future performance based on past behavior. Efficiency refers to how well the system utilizes available resources to achieve its goals. The article also discusses the impact of these characteristics on performance. Bondi notes that linear scalability is essential for achieving high performance as the workload increases. He also emphasizes that stable performance is critical for maintaining system reliability and avoiding unexpected downtime. Additionally, predictable performance helps administrators plan for future resource needs and avoid overprovisioning. The article highlights the importance of scalability and its characteristics for achieving optimal performance in software systems. Understanding these concepts can help developers and administrators design and manage systems that can handle increasing workloads without sacrificing performance or reliability.

The article [3] proposes a queueing model-based dynamic scalability approach for containerized clouds. The authors identify the limitations of traditional approaches to cloud scalability, which rely on reactive scaling and pre-defined thresholds. One practical idea presented in this article is the use of queueing models to predict resource demands and enable proactive scalability in containerized clouds. By leveraging queueing models, the authors propose a proactive approach to scalability that can help avoid the limitations of reactive scaling and pre-defined thresholds. The approach involves combining queueing models with container orchestration to predict and scale resources according to anticipated demand. The authors demonstrate the effectiveness of their approach through simulations and show that it can improve the scalability and efficiency of containerized clouds. This idea has the potential to significantly enhance the performance and responsiveness of cloud environments, which can be critical for meeting the needs of modern applications and workloads.

The paper [4] proposes a distributed real-time algorithm called “Distributed Real-time Multi-agent Mission Planning” for solving the collision-aware multi-agent mission planning problem. It partitions the entire unassigned task set into subsets and decomposes the original problem into several single-agent mission planning problems. The algorithm has been tested with dynamic obstacles and tasks and outperforms existing methods in both optimality and scalability. Distributed real-time algorithm is able to run in real-time with good scalability by reducing the dimension of the original problem. The results show that by using global information in a distributed manner, distributed real-time algorithm achieves better performance on both computation and optimality.

The paper [5] discusses the significance and process of Reverse ETL (Extract, Transform and Load) as a vital tool for data-driven decision-making in the Fourth Industrial Revolution. Reverse ETL is distinct from regular ETL and is used in cloud environments to eliminate data silos and promote operational analytics culture across the firm. The paper

highlights the benefits of using reverse ETL, such as scalability, performance and better visual representations and suggests that proper analysis and product selection can aid organizations in using the finest tool for multi-tasking across departments. Companies can develop these pipelines on the platform with cloud data warehousing like Snowflake and distribute them to any user within the cloud platform.

The article [6] describes the development and evaluation of robust stereo matching system designed to optimize the speed and power efficiency of embedded systems. By utilizing dedicated design modules, the system achieves state-of-the-art performance with lower power consumption compared to similar algorithms. The flexible design can adapt to any dedicated design modules by obtaining necessary parameters from a user. Despite a precision degradation due to aggregated path loss, dedicated design modules balance accuracy-and-speed while reducing the energy cost of a system, making it an attractive choice for real-world applications.

The book [7] challenges the traditional view of knowledge creation held by systems thinkers, proposing instead the Complex Responsive Processes of relating which draw on complexity sciences for analogies with human action. It emphasizes self-organizing interaction as the center of knowledge creation in organizations, where learning and knowledge creation are qualitative processes of power relating that are both emotional and intellectual. By placing organizational knowledge in the relationships between people, this book questions the belief that organizational knowledge is essentially codified and centralized.

One practical approach from the book "Flexibility and Stability in the Innovating Economy" [8] is to establish flexible organizational structures and processes to facilitate innovation. Authors discuss the importance of flexible organizational structures and processes for fostering innovation. They argue that traditional hierarchical structures can stifle innovation by inhibiting the flow of information and limiting the ability of individuals to pursue new ideas. To overcome these challenges, authors recommend adopting more flexible structures and processes that enable individuals and teams to collaborate across functions and departments. They suggest creating cross-functional teams, establishing regular communication channels and providing employees with opportunities to pursue innovative projects. The authors argue that a flexible organizational structure and processes are essential for creating an innovation-friendly culture and driving long-term growth and competitiveness.

An idea from the book [9] by Jason Bloomberg presents five organizing principles called Super trends, which include location independence, global cubicle, democratization of technology, deep interoperability and complex systems engineering. The book discusses the challenges of large organizations and places them in the broader business ecosystem, including small and midsize organizations and start-ups. It offers a new perspective on service-oriented architecture, cloud computing and mobile technologies and how organizations can achieve better business visibility through IT and enterprise architecture. The book lays out a multidimensional vision for achieving agile architectures and discusses crisis points that promise sudden, transformative change, providing insights into how organizations' spending on IT will continue to undergo radical change over the next years.

In the book [10] by Robert Axelrod and Michael Cohen is to use "adaptive networks" to promote cooperation and reduce conflict in complex systems. Adaptive networks are networks that can change and evolve over time based on feedback from the environment or

other agents. In complex systems, adaptive networks can help to promote cooperation and reduce conflict by allowing agents to adjust their behaviour based on the behaviour of others in the network. According to the authors, one way to implement adaptive networks is to use "threshold models," in which agents only cooperate with others who have a certain level of cooperation or reputation. By adjusting these thresholds over time, agents can learn to cooperate with each other and build trust, even in the absence of direct communication or coordination. This approach has been successfully applied in a variety of real-world contexts, including the formation of social networks, the management of natural resources and the regulation of financial markets. By using adaptive networks and threshold models, organizations and policymakers can harness the power of complexity to promote cooperation and reduce conflict, even in the face of uncertainty and change.

As we mentioned, organizational scalability refers to an organization's ability to accommodate growth or contraction in the future. We will distinguish the following elements:

A.1.1 Scalability Ratio: The scalability ratio measures the relationship between the resources allocated to a plan and the output that the plan generates. It can be calculated as:

$$\text{Scalability Ratio} = \text{Output} / \text{Resources} \quad (1)$$

For example, if a plan produces 100 units of output and requires 10 resources, the scalability ratio would be 10.

A.1.2 Time-to-Scale (TtS): Time-to-Scale measures the amount of time it takes for a plan to increase its output by a certain percentage. It can be calculated as:

$$\text{TtS} = \text{Time required to increase output} / \text{Percentage increase in output} \quad (2)$$

For example, if a plan takes six months to increase its output by 50%, the time-to-scale would be 12 months.

A.1.3 Staffing Scalability: Staffing scalability measures the ability of a plan to increase or decrease its staff size as needed. It can be calculated as:

$$\text{Staffing Scalability} = \text{Staffing Flexibility} / \text{Plan Complexity} \quad (3)$$

For example, if a plan can easily adjust its staffing levels to meet changing demands and has a low level of complexity, its staffing scalability would be high.

A.1.4 Cost Scalability: Cost scalability measures the ability of a plan to accommodate changes in costs as it grows or expands. It can be calculated as:

$$\text{Cost Scalability} = \text{Percentage Change in Cost} / \text{Percentage Change in Output} \quad (4)$$

For example, if a plan's costs increase by 10% as its output doubles, the cost scalability would be 5.

A.1.5 Process Scalability: Process scalability measures the ability of a plan to adjust its processes as it grows or expands. It can be calculated as:

$$\text{Process Scalability} = \text{Process Flexibility} / \text{Plan Complexity} \quad (5)$$

For example, if a plan can easily adjust its processes to meet changing demands and has a low level of complexity, its process scalability would be high.

A.1.6 Productivity Scalability: Productivity scalability measures the ability of a organization to adjust its processes as it grows or expands. It can be calculated as:

$$\text{Productivity Scalability} = (\text{New Value} - \text{Old Value}) / \text{Old Value} * 100 \quad (6)$$

Within this equation, the term "New Value" pertains to the magnitude of a distinct objective that aligns with an alternative timeframe for a sequence of occurrences. On the other hand, the term "Old Value" signifies the magnitude of the identical objective concerning a designated timeframe of events for comparison. Subsequently, the outcome is multiplied by 100 to denote the degree of scalability as a proportion.

A.2 Manageability as organizational scalability activity in organization from the perspective of "unknown in decision making process" and "unstable and with large uncertainty situation".

In terms of the organization's ability to manage scalability, there are several possible unknown factors that could impact it, including:

A.2.1 Resource Allocation: Organizations need to have a clear understanding of the resources required for scaling, including equipment, infrastructure, software and personnel. If the organization does not allocate sufficient resources for scaling, it can lead to problems such as lack of capacity, poor performance and increased downtime.

A.2.2 Organization Architecture: A poorly designed organization can make it difficult to scale effectively. It's important to ensure that the organization is designed with scalability in mind and that the organization's architecture can handle increased load or decreasing load without causing bottlenecks or other issues.

A.2.3 Monitoring and Reporting: Monitoring and reporting are crucial for managing scalability. Without effective monitoring and reporting tools, it can be difficult to identify and address issues that may arise during scaling. The organization needs to have a clear understanding of how to monitor and report on the system, including performance metrics, capacity utilization and availability.

A.2.4 Automation: As the organization scales, manual processes become more difficult to manage. Automation can help to streamline processes and reduce the risk of errors. However, if the organization does not have the right automation tools or processes in place, it can be challenging to scale effectively.

A.2.5 Organizational Culture: Scalability is not just a technical challenge; it's also a cultural one. The organization needs to foster a culture that supports scalability, including a willingness to take risks, embrace change and collaborate across teams. Without the right organizational culture, it can be difficult to scale effectively. The culture of an organization naturally flows down from the highest management to the lowest position and not the other way around.

A.2.6 Security and Compliance: As the organization scales, it becomes more vulnerable to security threats and compliance issues. The organization needs to have a clear understanding of how to manage security and compliance risks, including policies, procedures and tools for monitoring and reporting on security and compliance.

A.2.7 Capacity Planning: Capacity planning is critical for managing scalability. The organization needs to have a clear understanding of how to plan for capacity, including forecasting demand, determining resource requirements and identifying potential bottlenecks. Without effective capacity planning, it can be difficult to scale effectively.

A.2.8 Communication and Collaboration: Effective communication and collaboration are essential for managing scalability. The organization needs to ensure that all stakeholders are aware of the scaling plan, understand their roles and responsibilities and are able to collaborate effectively to achieve the organization's scalability goals. Naturally, the highest management role is exclusive and they set an example every day.

B.1 Scalability in the organization from the perspective spacetime

Scalability is the ability of an organization (a plan) to accommodate growth or decline without losing performance or efficiency. Naturally, scalability requires different combination between organizational space and time.

The book [11] presents how to build and scale a business with repeatability. The book focuses on the concept of levers, which are key strategic decisions that can significantly impact a business's growth and success. One idea presented in the book is the importance of creating a repeatable sales process. The authors explain that many businesses struggle to grow because they rely too heavily on the founder or a small team to drive sales. By creating a repeatable sales process, businesses can empower their entire team to sell effectively and consistently. This involves identifying the key steps in the sales process, documenting them and training everyone in the organization on how to execute them. By doing so, businesses can create a sustainable and scalable sales engine that can drive growth over the long term.

"Not knowing: the art of turning uncertainty into opportunity" is a book written by Steven D'Souza and Diana Renner that explores the idea of embracing uncertainty in order to unlock opportunities for growth and success and offers practical insights and tools for individuals and organizations seeking to navigate complex and uncertain environments. The authors argue that uncertainty is an inherent part of life and that our traditional approaches to dealing with it - such as seeking control, certainty and predictability - are often counterproductive. Instead, they suggest that we can learn to embrace uncertainty as an opportunity for growth, creativity and innovation. Through a combination of personal stories, case studies and practical exercises, the book offers a framework for developing a mindset that is open to uncertainty and ambiguity. The authors explore topics such as reframing, experimentation, learning from failure and mindfulness as key tools for turning uncertainty into opportunity. One of the central ideas of the book is the concept of "not knowing." The authors argue that the willingness to acknowledge what we don't know and to embrace the unknown can be a powerful driver of growth and innovation. By letting go of the need for certainty and control, individuals and organizations can become more agile, adaptable and resilient in the face of change and uncertainty. By reframing uncertainty as an opportunity rather than a threat, the book provides a practical roadmap for individuals and organizations seeking to thrive in uncertain times.

In the book [13], Kotter draws on his extensive experience as a management consultant to identify the key factors that can make or break a change initiative. He provides a clear framework for leading change, outlining eight stages that organizations must go through to successfully implement change. Kotter emphasizes the importance of establishing a sense of urgency, creating a powerful guiding coalition, developing a vision and strategy and communicating the change vision effectively. One of the central ideas in the book is the importance of creating a strong coalition to lead change. Kotter argues that successful change efforts require a diverse group of people with different skills, perspectives and experiences. The coalition must be able to work together effectively to create and implement a shared vision for change. Kotter highlights the need for coalition members to be willing to take risks, challenge the status quo and push back against resistance to change. Kotter also emphasizes the importance of communication in leading change. He suggests that leaders must be able to articulate a clear and compelling vision for change and they must communicate that vision consistently and effectively throughout the organization. This requires not only clear and concise messaging but also the ability to listen to feedback and adjust the vision as needed.

From the perspective of spacetime, there are several formulas that can be used to calculate plan scalability in the organization:

B.1.1 Spacetime Scalability (STS):

$$STS = (\text{Space Available} / \text{Space Required}) \times (\text{Time Available} / \text{Time Required}) \quad (7)$$

This formula takes into account both the space and time required to complete the plan, as well as the space and time available within the organization to accommodate growth or shrinkage.

B.1.2 Space Scalability (SS):

$$\text{Space Scalability} = \text{Space Available} / \text{Space Required} \quad (8)$$

This formula focuses solely on the space required to complete the plan and the space available within the organization to accommodate growth or restriction.

B.1.3 Time Scalability (TS):

$$\text{Time Scalability} = \text{Time Available} / \text{Time Required} \quad (9)$$

This formula focuses solely on the time required to complete the plan and the time available within the organization to accommodate expansion or limitation.

B.1.4 Resource Scalability (RS):

$$RS = \left(\frac{\text{Available Resources}}{\text{Required Resources}} \right) * (\text{Efficiency Factor}) \quad (10)$$

This formula takes into account the resources required to complete the plan, the resources available within the organization to accommodate upsurge in development or contraction and an efficiency factor that represents the level of productivity and effectiveness of the organization's resources.

B.1.5 Cost Scalability (CS):

$$\text{Cost Scalability} = \left(\frac{\text{Revenue Growth}}{\text{Cost Growth}} \right) * (\text{Efficiency Factor}) \quad (11)$$

This formula takes into account the revenue growth and cost growth associated with the plan, as well as an efficiency factor that represents the organization's ability to generate revenue and manage costs effectively.

C.1 Manageability as organizational scalability activity in organization coherently linked to “the window of opportunity” in the organization

The expression “window of opportunity” refers to a specific period of time during which a particular action or decision can be taken advantage of or accomplished with a greater likelihood of success. It implies that there is a limited time frame in which to think, take decisions and act and that if one misses the opportunity, the likelihood of success may decrease significantly. A “window of opportunity” can exist in many different contexts and may be influenced by various factors such as market conditions, trends or external events. Successfully recognizing and seizing a “window of opportunity” can lead to significant benefits and advantages, while failing to do so may result in missed opportunities or even negative consequences.

One practical tip from book “The Agile Enterprise: Reinventing your Organization for Success in an On-Demand World” [14] is: “Establish a culture of experimentation and learning. Experimentation involves testing new ideas in the market to gain feedback and validation. A culture of experimentation creates a safe environment for employees to try new things and learn from their successes and failures. This requires leadership support for failure and

willingness to take risks" (14, p. 104). The authors emphasize the importance of creating a culture of experimentation and learning in order to promote innovation and adaptability. This involves creating a safe environment for employees to take risks and learn from their failures, rather than punishing them for mistakes. By encouraging experimentation and learning, organizations can more quickly adapt to changing market conditions and stay competitive.

One of the central ideas of the book [15] is the importance of self-directed learning. Reid argues that individuals who take responsibility for their own learning are more likely to achieve their goals and succeed in life. He provides practical tips and strategies for developing a self-directed learning approach, including setting goals, creating a learning plan and seeking out resources and support.

The book [16] begins by defining software scalability and why it is important in today's world. Software scalability refers to the ability of software systems to adapt and handle increased workloads without impacting performance. With the growing demand for software applications, scalability has become a critical factor for businesses to stay competitive. The book then discusses various techniques and tools that can be used to measure software scalability, such as load testing and performance profiling. One of the main ideas presented in the book is the importance of designing software with scalability in mind from the beginning. The author emphasizes that software scalability is not something that can be added on as an afterthought, but rather it should be a fundamental aspect of software design. The book provides practical advice on how to design software systems that can scale, such as breaking up the system into smaller, more manageable components and using distributed computing architectures. The book also covers various challenges and trade-offs that come with designing scalable software systems. For example, designing a system for high scalability may lead to increased complexity and reduced maintainability. The author provides guidance on how to strike a balance between scalability and other important factors such as reliability and security.

The book [17] authored by Artur Ejsmont focuses on the various aspects of web application scalability, such as architecture, design, testing, deployment and performance tuning, front-end and back-end design principles, database design and distributed systems. By designing for scalability, organizations can avoid costly and time-consuming rewrites later on and be better equipped to handle growth and increased traffic.

One of the key ideas presented in the book [18], where the authors introduce the three rules of three are the rule of three in software design, the rule of three in infrastructure and the rule of three in organizational structure. The rule of three in software design suggests that software should be designed with three key objectives in mind: simplicity, scalability and maintainability. The rule of three in infrastructure suggests that a scalable infrastructure should be designed with three key components: redundancy, load balancing and failover. Finally, the rule of three in organizational structure suggests that organizations should be structured around three key roles: technical leaders, product owners and operational leaders.

One key idea from the book [19] where Wenner discusses the importance of elite organization and productivity. To achieve elite productivity, Wenner recommends that businesses focus on three key areas: people, process and technology. He argues that it is essential to hire top talent and invest in their development, to develop efficient and streamlined processes that enable employees to work at their best and to leverage technology to automate tasks and increase efficiency. By focusing on these areas, businesses can achieve elite productivity and become high-growth, high-profit organizations.

The book [20] covers a broad range of topics related to scalability, including architecture, infrastructure, performance testing and database design. One practical idea discussed in the book is the concept of scaling through partitioning. Partitioning involves splitting large data sets into smaller, more manageable pieces and distributing them across multiple servers or nodes. By partitioning data, applications can take advantage of the processing power and storage capacity of multiple servers, improving performance and scalability. The author delves deeper into the different types of partitioning, including horizontal, vertical and functional partitioning. Horizontal partitioning involves dividing data by rows, while vertical partitioning involves dividing data by columns. Functional partitioning involves grouping data based on specific functions or business requirements. The author also explores the trade-offs and challenges associated with partitioning, including data consistency, query performance and maintenance complexity.

There are several elements of plan scalability that are coherently linked to the window of opportunity of an organization:

C.1.1 Resource availability: The availability of resources, including personnel, funding and technology is crucial for plan scalability. If an organization has access to ample resources, it can scale its plans quickly and effectively.

C.1.2 Flexibility: The ability to adapt to changing circumstances and requirements is essential for scalability. Plans that are too rigid or inflexible may not be able to scale effectively, especially if the window of opportunity is narrow.

C.1.3 Modular design: A modular design allows organizations to scale plans by adding or removing components as needed. Modular designs also enable organizations to update and improve their plans without having to start from scratch.

C.1.4 Cloud-based infrastructure: Cloud-based infrastructure provides organizations with the flexibility and scalability needed to quickly and easily scale plans up or down. Cloud infrastructure also allows for greater agility and responsiveness to changing market conditions.

C.1.5 Automation: Automation can help organizations scale plans by reducing manual workloads and increasing efficiency. Automated processes can also help organizations respond quickly to changing market conditions.

C.1.6 Scalable data management: Effective data management is essential for scalability. Organizations that can quickly and easily access and analyse data can scale their plans more effectively.

C.1.7 Agile methodologies: Agile methodologies, such as Scrum or Kanban, can help organizations respond quickly to changing market conditions and scale their plans effectively. More important than Scrum or Kanban methodologies is the strong will of the highest management to support their teams. If there is no credibility from the lower position, all highest management activities are in vain.

C.1.8 Strategic partnerships: Strategic partnerships with other organizations can provide access to additional resources, technology and expertise, allowing organizations to scale their plans more effectively.

C.1.9 Scalable marketing and sales: Marketing and sales strategies that can scale quickly and efficiently are essential for taking advantage of a window of opportunity. Organizations that can rapidly expand their customer base can capitalize on opportunities before their competitors. Naturally, do not forget the unseen supply chain that supports great sales and imaginative marketing.

Next, we will apply scalability to the decision-making process to improve the organization's manageability.

D.1 Scalability in the organization from the perspective of forecasting in an organization:

D.1.1 Capacity planning: This formula calculates the maximum amount of work that can be done by an organization in a given period of time. The formula is:

$$MC = (NR) * (NWHD) * (NWDP) \quad (12)$$

Where:

Maximum capacity = MC

Number of resources = NR

Number of working hours per day = $NWHD$

Number of working days in a period = $NWDP$

D.1.2 Plan demand forecasting: This formula helps predict the amount of work that will be required for a plan in the future. The formula is:

$$PDF = (ND) * (SD) * (ETED) \quad (13)$$

Where:

Plan demand forecasting = PDF

Number of deliverables = ND

Size of deliverables = SD

Estimated time for each deliverable = $ETED$

D.1.3 Resource forecasting: This formula helps predict the number of resources that will be needed for a plan in the future. The formula is:

$$\text{Resource demand} = (\text{Plan demand}) / (\text{Average productivity of a resource}) \quad (14)$$

D.1.4 Cost forecasting (CF): This formula helps predict the cost of a plan in the future. The formula is:

$$CF = (\text{Resource demand}) * (\text{Cost per resource}) + (\text{Other plan expenses}) \quad (15)$$

D.1.5 Time-to-market forecasting: This formula helps predict the time it will take to complete a plan. The formula is:

$$\text{Time – to – market} = (\text{Plan demand}) / (\text{Productivity of resources}) \quad (16)$$

E.1 Scalability in the organization from the perspective of planning:

E.1.1 Resource capacity planning:

$$TRC = (RA) * (NAR) \quad (17)$$

Where:

Total resource capacity = TRC

Resource availability = RA

Number of available resources = NAR

E.1.2 Plan cost estimation:

$$TPC = (TNHRP) * (HRER) \quad (18)$$

Where:

Total plan cost = TPC

Total number of hours required for the plan = $TNHRP$

Hourly rate for each resource = $HRER$

E.1.3 Time management:

$$\text{Time per resource} = (\text{Plan duration}) / (\text{Number of available resources}) \quad (19)$$

E.1.4 Risk management:

$$\text{Risk score} = (\text{Probability of risk occurring}) * (\text{Impact of risk}) \quad (20)$$

For example, if there is a 30% chance of a risk occurring and the impact of that risk would be a delay of 2 weeks, then the risk score would be (30%) * (2 weeks) = 0.6 weeks.

E.1.5 Scope management:

$$\text{Scope per resource} = (\text{Total plan scope}) / (\text{Number of available resources}) \quad (21)$$

For example, if organization plan has a total scope of 500 tasks and there are 5 developers available to work on it, then the scope per resource would be (500 tasks) / (5 developers) = 100 tasks per developer.

F.1 Scalability in the organization from the perspective of organizing:**F.1.1 Scalability Index (SI)**

$$SI = (\text{Total Plan Cost} / \text{Size of Plan Team}) * \text{Time to Completion} \quad (22)$$

This formula calculates the overall scalability of the plan based on the cost, team size and completion time. A higher SI indicates a more scalable plan.

F.1.2 Resource Scalability (RS)

$$RS = \text{Total Plan Cost} / \text{Number of Resources} \quad (23)$$

This formula calculates the resource scalability of the plan based on the cost and the number of resources required. A higher RS indicates a more scalable plan.

F.1.3 Capacity Scalability (CS)

$$CS = \text{Number of Plans that can be completed simultaneously} / \text{Total Plan Time} \quad (24)$$

This formula calculates the capacity scalability of the organization based on the number of plans that can be completed simultaneously and the total plan time. A higher CS indicates a more scalable organization.

F.1.4 Human Resource Scalability (HRS)

$$HRS = \text{Total Plan Cost} / \text{Number of Human Resources} \quad (25)$$

This formula calculates the human resource scalability of the plan based on the cost and the number of human resources required. A higher HRS indicates a more scalable plan.

F.1.5 Production Scalability (PS)

$$PS = \text{Total Plan Output} / \text{Time to Completion} \quad (26)$$

This formula calculates the production scalability of the plan based on the total plan output and the time to completion. A higher PS indicates a more scalable plan.

G.1 Scalability in the organization from the perspective of implementation:**G.1.1 Capacity planning scalability (CPS):**

$$CPS = (\text{Available resources} / \text{Resource required per plan}) * \text{Number of plans} \quad (27)$$

G.1.2 Workload distribution scalability (WDS):

$$WDS = \text{Total workload} / (\text{Average workload per plan} * \text{Number of plans}) \quad (28)$$

G.1.3 Time-based scalability (TBS):

$$TBS = (Total\ time\ available / Time\ required\ per\ plan) * Number\ of\ plans \quad (29)$$

G.1.4 Cost-based scalability (CBS):

$$CBS = (Total\ budget / Cost\ per\ plan) * Number\ of\ plans \quad (30)$$

G.1.5 Resource-based scalability (RBS):

$$RBS = Total\ resource\ pool / (Resource\ required\ per\ plan * Number\ of\ plans) \quad (31)$$

It's important to take into account other factors such as the complexity of the plan, the experience of the team and the availability of technology and tools when considering scalability.

H.1 Scalability in the organization from the perspective of control:

H.1.1 Control Span: Control Span is a measure of the number of direct reports a manager can effectively manage.

$$Control\ Span = Number\ of\ Employees / Number\ of\ Managers \quad (32)$$

If the Control Span is too high, managers may not have sufficient time to devote to each employee and control may become more difficult. Conversely, if the Control Span is too low, the organization may have too many managers, leading to increased costs and inefficiencies.

H.1.2 Management Ratio: Management Ratio is a measure of the proportion of managers to employees.

$$Management\ Ratio = Number\ of\ Managers / Total\ Employees \quad (33)$$

A higher Management Ratio means there are more managers in the organization, which can lead to more control but also higher costs. A lower Management Ratio may indicate fewer managers, which can lead to less control but lower costs.

H.1.3 Plan Complexity Index (PCI): Plan Complexity Index is a measure of the complexity of plans within an organization.

$$PCI = (Number\ of\ Plans * Average\ Complexity\ Score) / Total\ Employees \quad (34)$$

The Average Complexity Score is a subjective measure of the difficulty of managing a plan and it can be assigned by planning managers or other stakeholders. A higher Plan Complexity Index may indicate more complex plans, which can be more challenging to control. Conversely, a lower Plan Complexity Index may indicate fewer complex plans, which may be easier to control.

3. Results

I.1 Scalability in the organization from the perspective of decision-making:

These metrics can be used to evaluate the scalability of a plan in different decision-making stages and help identify areas for improvement in the decision-making process:

I.1.1 Identification of the problem:

Number of customer complaints

Number of internal requests

Frequency of recurring issues

Time taken to resolve the problem

I.1.2 Gathering relevant information:

Number of sources consulted

Time taken to gather information

Quality and reliability of information

1.1.3 Evaluation of alternatives:

Number of alternative solutions considered

Time taken to evaluate alternatives

Criteria used to evaluate alternatives

1.1.4 Making the decision:

Time taken to make the decision

Level of consensus among decision-makers

Confidence in the chosen solution

1.1.5 Level of Implementation:

Time taken to implement the solution

Level of resources required for implementation

Probability of change required for implementation

1.1.6 Score Review:

Time taken to review the outcome

Level of satisfaction with the outcome

Degree of improvement achieved

1.1 Condition of “knowledge in decision making process” and “stable and known situation”*1.1.1 Identification of the problem:*

Let:

 P be the problem identification for period of time NC be the number of customer complaints plus number internal complains FI be the frequency of recurring issues TTR be the time taken to resolve the problem

$$P = NC * FI * TTR \quad (35)$$

This formula takes into account the number of customer complaints (NC), the frequency of recurring issues (FI) and the time taken to resolve the problem (TTR) and combines them into a single metric that represents the severity of the problem.

The idea is that the more complaints there are, the higher the frequency of recurring issues and the longer it takes to resolve the problem, the more severe the problem is likely to be. By multiplying these factors together, we can obtain a composite score that gives us a rough idea of how urgent the problem is and how much attention it requires.

1.1.2 Gathering relevant information:

$$G = (N + T) / Q \quad (36)$$

Where:

 G represents the effectiveness of gathering relevant information N is the number of sources consulted T is the time taken to gather information Q is the quality and reliability of information

In this formula, the numerator ($N + T$) represents the effort put into gathering information, by taking into account both the number of sources consulted and the time taken. The denominator (Q) represents the quality and reliability of the information obtained.

As such, the formula suggests that the effectiveness of gathering relevant information is dependent on both the amount of effort put into the process (number of sources consulted and time taken) and the quality and reliability of the information obtained. The higher the number of sources consulted and time taken and the lower the quality and reliability of the

information, the less effective the process will be. Conversely, the lower the number of sources consulted and time taken and the higher the quality and reliability of the information, the more effective the process will be.

J.1.3 Evaluation of alternatives:

Let:

N be the number of alternative solutions considered

T be the time taken to evaluate alternatives

C be the number of criteria used to evaluate alternatives

We can use the following formula:

$$\text{Evaluation of alternatives} = N * T * C \quad (37)$$

This formula states that the evaluation of alternatives is directly proportional to the number of alternative solutions considered, the time taken to evaluate alternatives and the number of criteria used to evaluate alternatives. In other words, as any of these variables increase, the evaluation of alternatives will also increase.

J.1.4 Making the decision:

$$TTMD = f(1 - LCDM) * (1 - CCS) \quad (38)$$

Where:

Time taken to make the decision = $TTMD$

f is a scaling factor that can be adjusted to fit the specific context and data

Level of consensus among decision-makers = $LCDM$

Confidence in the chosen solution = CCS

Level of consensus among decision-makers is a value between 0 and 1 that represents the degree of agreement or disagreement among the people involved in making the decision. A higher value means a higher level of consensus.

Confidence in the chosen solution is also a value between 0 and 1 that represents how certain the decision-makers are about the quality and effectiveness of the chosen solution. A higher value means a higher level of confidence.

The formula suggests that the time taken to make a decision is inversely proportional to the product of $(1 - \text{level of consensus})$ and $(1 - \text{confidence in the chosen solution})$, i.e., the less agreement and confidence there is, the more time it takes to reach a decision. This makes intuitive sense since lack of consensus and low confidence can lead to debates, discussions and re-evaluations, all of which can extend the time taken to make a decision.

J.1.5 Level of Implementation

Let:

Level of Implementation = LI

Time taken to implement the solution = $TTIS$

Level of resources required for implementation = $LRRI$

Probability of change required for implementation = $PCRI$

We can use these variables to define the level of implementation as follows:

$$LI = f(TTIS, LRRI, PCRI) \quad (39)$$

where " f " is a function that relates the three variables to the level of implementation.

To create a specific formula, we would need more information about the nature of the relationship between these variables. We might hypothesize that longer implementation times, higher resource requirements and higher probabilities of change would all lead to lower levels of implementation. In that case, we could use a formula like:

$$LI = k / (TTIS * LRRI * PCRI) \quad (40)$$

where "k" is a constant that would need to be chosen based on the scale and units of the variables. This formula assumes that the impact of each variable is multiplicative and that higher values of any one variable will decrease the level of implementation. However, this is just one possible formula and the specific relationship between the variables may vary depending on the context.

J.1.6 Score Review (SR):

Time taken to review the outcome.

Level of satisfaction with the outcome.

Degree of improvement achieved.

Formula for calculating a review score based on the three factors:

$$SR = (Level\ of\ satisfaction * Degree\ of\ improvement) / Time\ taken \quad (41)$$

In this formula, the level of satisfaction and degree of improvement are multiplied together to capture the overall quality of the outcome and then divided by the time taken to review it to account for the reviewer's efficiency or thoroughness. The formula assumes that higher levels of satisfaction and improvement are better and that shorter review times are also better.

Units of measure of decision-making results.

J.1.7 *Success rate*: This unit of measure assesses the percentage of successful decisions made over a period of time. It is calculated by dividing the number of successful decisions by the total number of decisions made.

J.1.8 *Cost-benefit ratio*: This unit of measure assesses the economic value of a decision by comparing the costs of implementing the decision to the benefits it generates. It is calculated by dividing the total benefits by the total costs.

J.1.9 *Risk assessment*: This unit of measure assesses the level of risk associated with a decision. It takes into account the potential negative consequences of a decision and the likelihood of those consequences occurring.

J.1.10 *Time-to-decision*: This unit of measure assesses the amount of time it takes to make a decision. It is calculated by measuring the time from when a decision is first considered to when it is made.

J.1.11 *Customer satisfaction*: This unit of measure assesses the level of satisfaction of the stakeholders affected by a decision. It is calculated by measuring the feedback of those stakeholders and determining their level of satisfaction with the decision.

K.1 Calculation of conditional probability that decision-making scalability is successful

K.1.1 Let:

Decision-making scalability is successful = *SSDM*.

Identification of the problem (a priory event) = *P*.

Gathering relevant information (a priory event) = *G*.

Evaluation of alternatives (a priory event) = *E*.

Making the decision (a priory event) = *DM*.

Level of Implementation (posterior event) = *L*.

Score Review (posterior event) = *R*.

Conditional Probability formula for successful decision-making scalability (*SSDM*) based on Bayes formula, given a priory events *P*, *G*, *E* and *DM* and the posterior events *L* and *R* can be expressed as:

$$P(SSDM | P, G, E, DM, L, R) = P(L | P, G, E, DM, R, SSDM) * P(R | P, G, E, DM, SSDM) * P(SSDM | P, G, E, DM) / P(L, R | P, G, E, DM) \quad (42)$$

Here, we are trying to find the probability of successful decision-making scalability given the events P, G, E and DM and the posterior events L and R . We use Bayes theorem to find this probability by considering the conditional probabilities of L and R given the other events, the conditional probability of $SSDM$ given P, G, E and DM and the joint probability of L and R given P, G, E and DM .

K.1.2 The conditional probability of successful decision-making scalability given P, G, E and DM can be expressed as:

$$P(SSDM | P, G, E, DM) = k * P(P | SSDM) * P(G | SSDM) * P(E | SSDM) * P(DM | SSDM) \quad (43)$$

where k is a normalization constant and $P(P|SSDM)$, $P(G|SSDM)$, $P(E|SSDM)$ and $P(DM|SSDM)$ are the conditional probabilities of P, G, E and DM given $SSDM$, respectively. We keep in mind that these conditional probabilities may depend on the context and the available data. This formula provides a way to quantify the probability of successful decision-making scalability based on various factors related to problem identification, information gathering, evaluation of alternatives, decision-making, implementation and review. This would allow managers to evaluate the effectiveness of the decision-making process and identify areas for improvement and keep rational level of scalability between mentioned elements. We also keep in mind that obtained formula (42) is useful in condition of "knowledge in decision making process" and "stable and known situation" [1, p. 84].

L.1 Condition of "unknown in decision making process" and "unstable and with large uncertainty situation"

When faced with uncertainty, decision-making is challenging. However, there are techniques that can help in making decisions under such conditions – "unknown in decision making process", "unstable and with large uncertainty situation" [1, pp. 84-85]. Here are few techniques that are suitable for decision-making under uncertainty:

L.1.1 Scenario analysis: This technique involves creating multiple scenarios that could occur and evaluating the potential outcomes of each scenario. This helps in identifying the best course of action based on the likelihood of each scenario occurring.

L.1.2 Monte Carlo simulation: This technique involves using statistical methods to create models that simulate different outcomes. This helps in identifying the probability of each outcome occurring and choosing the best course of action based on the most likely outcome.

L.1.3. Decision trees: This technique involves mapping out different decision paths and their potential outcomes. This helps in identifying the best course of action based on the potential outcomes of each decision path.

L.1.4 Sensitivity analysis: This technique involves testing the impact of changing certain variables on the decision outcome. This helps in identifying the most critical variables that could impact the decision and choosing the best course of action based on the most stable variables.

L.1.5 Real options analysis: This technique involves evaluating the potential outcomes of different options and choosing the best course of action based on the flexibility of each option. This helps in identifying the best course of action based on the potential to adjust the decision based on changing circumstances.

M.1 Formulas lose their effectiveness to a great extent under conditions of uncertainty

At this point we may develop the formula for mentioned above five techniques. But we would not do so, because we know that under uncertainty conditions the power of formulas decrease drastically. While formulas and sophisticated quantitative tools can be useful in some cases, they are not a panacea and decision-makers must be willing to use own simple approaches in order to navigate complicated, uncertain situations. That is why we will use more intuitive approach promoted by Gerd Gigerenzer [21], who has proposed several algorithms for decision-making under uncertainty, including:

M.1.1 Take the best: This algorithm involves selecting the option with the highest cue validity, which is the cue that has the highest correlation with the outcome of interest. If there are ties, additional cues can be used to break the tie. This approach is particularly useful when there are many cues and limited cognitive resources.

M.1.2 Fast and frugal trees: This algorithm involves constructing a decision tree based on a small number of cues, where each node in the tree represents a decision point and each branch represents a possible outcome. The algorithm selects the cue with the highest validity at each decision point and continues until a final decision is reached. This approach is useful when there are a small number of cues and decisions need to be made quickly.

M.1.3 Recognition heuristics: This algorithm involves making a decision based on the recognition of one or more options. The idea is that options that are more familiar are more likely to be correct. This approach is particularly useful when there is limited information or time available.

M.1.4 Take the less-is-more approach: This algorithm involves using less information to make a decision, which can improve decision-making accuracy. For example, if there are many cues available, only using a few cues with high validity can lead to better decisions than using all available cues.

Gigerenzer's approach emphasizes the importance of using simple, intuitive heuristics to make decisions under uncertainty, rather than relying on complex statistical models or exhaustive information search.

In our approach to scalable decision-making, we will use formulas and software for "knowledge in decision making process" and "stable and known situation". When faced with uncertainty described by us as "unknown in decision making process", "unstable and with large uncertainty situation" we will use our conscious experience, learning abilities [22] and courage and also the algorithms proposed by Gerd Gigerenzer as well by other thinking human beings, including ourselves (at least sometimes thinking).

4. Discussion

In order to calculate productivity scalability between different optimization objectives of reference research paper mentioned in the Tables 3-7 [23, p.11-14] will apply formula (6) from our current article:

$$\text{Productivity Scalability} = (\text{New Value} - \text{Old Value}) / \text{Old Value} * 100 \quad (44)$$

In this case, the "New Value" refers to the value of a particular objective for a different duration of unexpected events, and the "Old Value" refers to the value of the same objective for a reference duration of unexpected events. The result is then multiplied by 100 to express the scalability as a percentage.

To calculate the productivity scalability between data (cost, time, and CO_2 emissions), we need to determine the growth rate or change in values between different durations of unexpected events.

We can calculate the productivity scalability for each case:

Scalability for Case A (Costs & Time & CO₂ Emissions) compared to Case B (Costs):

$$\text{Transportation Costs Scalability} = (1,201,925 - 1,202,427) / 1,202,427 * 100 = -0.042\% \quad (45)$$

$$\text{Time Costs Scalability} = (453,134 - 436,881) / 436,881 * 100 = 3.73\% \quad (46)$$

$$\text{Emission Costs Scalability} = (40,952 - 40,971) / 40,971 * 100 = -0.046\% \quad (47)$$

$$\text{Total Costs Scalability} = (1,696,011 - 1,680,279) / 1,680,279 * 100 = 0.94\% \quad (48)$$

Scalability for Case A (Costs & Time & Emissions) compared to Case C (CO₂ Emissions):

$$\text{Transportation Costs Scalability} = (1,269,887 - 1,202,427) / 1,202,427 * 100 = 5.62\% \quad (49)$$

$$\text{Time Costs Scalability} = (460,459 - 436,881) / 436,881 * 100 = 5.39\% \quad (50)$$

$$\text{Emission Costs Scalability} = (37,946 - 40,971) / 40,971 * 100 = -7.37\% \quad (51)$$

$$\text{Total Costs Scalability} = (1,768,281 - 1,680,279) / 1,680,279 * 100 = 5.23\% \quad (52)$$

Scalability for Case B (Costs) compared to Case C (CO₂ Emissions):

$$\text{Transportation Costs Scalability} = (1,269,887 - 1,201,925) / 1,201,925 * 100 = 5.65\% \quad (53)$$

$$\text{Time Costs Scalability} = (460,459 - 453,134) / 453,134 * 100 = 1.61\% \quad (54)$$

$$\text{Emission Costs Scalability} = (37,946 - 40,952) / 40,952 * 100 = -7.35\% \quad (55)$$

$$\text{Total Costs Scalability} = (1,768,281 - 1,696,011) / 1,696,011 * 100 = 4.26\% \quad (56)$$

Based on the calculated data, we can infer the following specific conclusions for the different scenarios [23] checking our hypothesis about productivity scalability:

Situation A (Scalability is productive):

A) *Transportation Costs*: There is a marginal decrease of 0.042% in transportation costs when scaling from Case A to Case B. This indicates that scalability in this aspect has a negligible effect on costs, what is good.

A) *Time Costs*: There is an increase of 3.73% in time costs when scaling from Case A to Case B. This suggests that scalability in terms of time results in increased costs.

A) *Emission Costs*: There is a marginal decrease of 0.046% in emission costs when scaling from Case A to Case B. This implies that scalability in terms of emissions has a limited effect on reducing costs.

A) *Total Costs*: There is a slight increase of 0.94% in total costs when scaling from Case A to Case B. This indicates that overall scalability in this situation has a minor impact on cost reduction.

Situation B (Scalability is unproductive):

B) *Transportation Costs*: There is an increase of 5.65% in transportation costs when scaling from Case B to Case C. This implies that scalability in transportation costs is not productive and leads to higher costs.

B) *Time Costs*: There is a slight increase of 1.61% in time costs when scaling from Case B to Case C. This suggests that scalability in terms of time has a limited impact on costs.

B) *Emission Costs*: There is a decrease of 7.35% in emission costs when scaling from Case B to Case C. This indicates that scalability in emissions is somewhat productive, resulting in reduced costs.

B) *Total Costs*: There is an increase of 4.26% in total costs when scaling from Case B to Case C. This implies that overall scalability in this situation has a negative effect on cost reduction.

Comprising the resolutions from reference paper [23, pp. 12 - 16] and finale from our analysis based on our hypothesis we may interfere following **general conclusions (GC)**:

1GC. Minimizing waiting times and optimizing routes in Case A can lead to cost savings in terms of reduced inventory costs, penalty costs and faster transports.

2GC. Using more truck services in Case A to prioritize time costs may increase transportation costs compared to other cases.

3GC. The organization may need to manage a larger number of services (between 650 and 700) in Case A, with a focus on efficient coordination and scheduling to minimize waiting times.

4GC. Not prioritizing scalability in Cases B and C may result in suboptimal routes, potentially leading to higher inventory costs, penalty costs, and longer delivery times.

5GC. Case C, which focuses on minimizing emissions, may lead to higher overall costs due to increased transportation and time costs.

6GC. Consolidation efforts in Case C can result in reduced usage of services and a preference for electric trains with lower emissions. This may require adjustments in logistics and coordination to ensure efficient transportation.

There is slight difference at the Case C, where level of CO_2 emissions increase in assumption of our hypothesis (productivity scalability) because of running longer distances, implies more CO_2 emissions. In other respect all of indicators calculated through scalability reveal the same conclusions as from reference research paper [23].

For situation A, scalability is productive in terms of transportation costs, emission costs, but unproductive in terms of time costs. For situation B, scalability is unproductive in terms of transportation costs and time costs, somewhat productive in terms of emission costs. By calculating the productivity scalability between different optimization objectives, we can assess the changes in costs, time and emissions as the duration of unexpected events varies.

In summary, by considering scalability, decision-makers can identify optimal strategies to enhance performance and minimize disruptions based on specific, individual situation.

5. Conclusions

N.1 Manageability, organizational scalability activity and decision-making in organization from the perspective of “successful decision-making scalability”

Based on the evaluation of our hypothesis in the discussion section, we can assert that our hypothesis is functioning effectively, accurately predicting values and proportions. These findings indicate that our hypothesis can be utilized as a calculation and decision-making tool to effectively manage organizational situations.

N.2 Manageability, organizational scalability activity and decision-making in organization from the perspective of “learning scalability” or “knowledge gained through suffering”

We are using the word “suffering” as process of knowing being alive or, expressed in other way, “suffering as process of teaching-learning in life in order to acquire new knowledge, including scalability”. After thinking long and hard, the manageability, organizational scalability and decision-making in organizations can be structured from the perspective of ‘learning scalability’ or ‘knowledge gained through suffering’ in the following way:

N.2.1 Increased empathy and compassion. Knowledge gained through suffering often leads to a greater understanding and empathy for others who are going through similar struggles. It can provide a unique perspective on the world that allows individuals to connect with others on a deeper level and offer meaningful support.

N.2.2 Greater resilience and adaptability. Suffering can be a catalyst for growth, forcing individuals to confront their limitations and develop new coping mechanisms. This knowledge can help build resilience and adaptability, allowing employees to better navigate future challenges.

N.2.3 Improved self-awareness. Going through difficult experiences can provide valuable insights into one's own thoughts, feelings and behaviors. This knowledge can help individuals identify areas for personal growth and make positive changes in their lives.

N.2.4 Increased appreciation for life. Surviving difficult cognitive experiences can also lead to a greater appreciation for life and a deeper sense of gratitude. This knowledge can help individuals find joy and meaning in even the most difficult circumstances.

N.2.5 Deeper understanding of the human condition. Suffering is a universal human experience and those who have gone through it often gain a unique perspective on the complexities of the human condition. This knowledge can lead to a greater understanding of the world around us and the people who inhabit it.

N.2.6 Prioritize a single variable. In time-sensitive situations, decision-makers often prioritize a single variable over other information, leading to more efficient decision-making and reduced cognitive overload, despite potential misalignment with organizational rules.

N.2.7 Human decision making. As human beings, we have the ability to choose the best method for many situations. This includes understanding, learning and applying established methods, as well as critically evaluating, assessing and coming up with new ideas. We can adapt to new circumstances by using our cognitive abilities, emotions and desire for independence.

In considering manageability as journey and cognition, not as a journey in miles or kilometers, but one in experience and knowledge, we recognize that growth and development are not solely measured by the accumulation of facts and reasoning, but also by the depth and richness of our experiences and competencies. Every person's journey is unique, shaped by their own individual experiences and the positive knowledge they gain from them. By valuing and honoring these experiences, we can cultivate a more compassionate, empathetic, scalable and manageable organization and, more broadly, a society that recognizes the value of every individual's unique journey. Realizing the impracticability of the mentioned above seven rules (*N.2.1 – N.2.7*), human beings who know, realize that all the more, they should strive to fulfil them to make them real and be alive.

Conflicts of Interest. The authors declare no conflict of interest.

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Citation: Nantoi, V.; Nantoi, D. Streamlining organizational manageability through scalable decision making. *Journal of Social Sciences*. 2023, 6 (3), pp. 20-41. [https://doi.org/10.52326/jss.utm.2023.6\(3\).02](https://doi.org/10.52326/jss.utm.2023.6(3).02).

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Submission of manuscripts:

jes@meridian.utm.md

[https://doi.org/10.52326/jss.utm.2023.6\(3\).03](https://doi.org/10.52326/jss.utm.2023.6(3).03)
UDC 338.43:631.95(498)



ANALYSIS AND IMPACT OF APIA ACTIVITY ON DEVELOPMENT AND SUPPORT OF AGRICULTURAL SECTOR IN ROMANIA

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Received: 09. 02. 2023

Accepted: 09. 28. 2023

Abstract. Agriculture is a very important sector for Romania, providing food and products of vegetable and animal origin, jobs for people in villages and business opportunities for enterprises and investors. Romania's agricultural area is in permanent change, influenced by European money that was attracted through support measures and community policies, and environmental protection and the need to ensure a sustainable development of agriculture in Romania made the activity of the Agency for Payments and Intervention for Agriculture (APIA) stands out as an important factor in aligning modern agriculture with the environment. Through this study, we aim to analyze the way in which APIA promotes sustainable agricultural practices and provides support to farmers to protect the environment and whether the agency's activity has brought benefits to the economic development of Romania and Neamț County. We thus demonstrate the important role that the agency has for the economy, for supporting farmers and agricultural producers in Romania, but also for the country's agricultural policy, the institution participating in the development and implementation of national agricultural policies and strategies, as well as in the process of negotiating subsidies and projects within the European Union (EU) agricultural financing system.

Keywords: *environment, European funds, farmers, programs, subsidies.*

Abstract. Agricultura este un sector foarte important pentru România, oferind alimente și produse de origine vegetală și animală, locuri de muncă pentru oamenii din sate și oportunități de afaceri pentru întreprinderi și investitori. Zona agricolă a României este într-o permanentă schimbare, influențată de banii europeni care au fost atrași prin măsuri de sprijin și politici comunitare, iar protecția mediului și nevoia de a asigura o dezvoltare durabilă a agriculturii în România au făcut ca activitatea Agenției de Plăți și Intervenție pentru Agricultură (APIA) să se remarce ca un factor important în alinierea agriculturii moderne la mediul înconjurător. Prin acest studiu ne-am propus să analizăm modul în care APIA promovează practicile agricole durabile și oferă sprijin fermierilor pentru protejarea mediului și dacă activitatea agenției a adus beneficii dezvoltării economice României și județului

Neamț. Demonstrăm astfel rolul important pe care îl are agenția pentru economie, pentru sprijinirea fermierilor și producătorilor agricoli din România, dar și pentru politica agricolă a țării, instituția participând la elaborarea și implementarea politicilor și strategiilor agricole naționale, precum și în procesul de negociere a subvențiilor și proiectelor în cadrul sistemului de finanțare a agriculturii Uniunii Europene.

Cuvinte cheie: *mediu, fonduri europene, fermieri, programe, subvenții.*

1. Introduction

The Agency for Payments and Intervention for Agriculture (APIA) was created in 2004, it is responsible for the management and implementation of the agricultural policies of the European Union in Romania since 2007, but its activity is not limited only to environmental protection, but also has a social dimension and economic importance. Sustainable rural development is supported, supporting farmers in diversifying their activities and finding new income opportunities, it fosters agri-food excellence, by providing financial support for the implementation of food quality and safety standards, it supports the conservation of biodiversity within agricultural holdings, through agri-environment and climate payment schemes, with farmers being encouraged to implement measures to conserve natural habitats and protect rare and threatened species. These actions contribute to the maintenance of an ecological balance and the preservation of biological diversity, essential for the viability and resilience of agricultural ecosystems.

The main services offered by this agency are:

- Direct payments within the EU common agricultural policy, plant and animal husbandry.
- Subsidies and European funds for agricultural projects and rural development areas, such as the modernization and expansion of farms, the consolidation of agricultural infrastructure and land development.
- Registration and updating of information on agricultural land owners, land areas and farm animals.
- Administration of the pasture control system.
- Providing technical assistance and consulting services for farmers.
- Granting certificates to facilitate obtaining bank loans.

2. Materials and Methods

One of the main roles of APIA is the management and distribution of European funds intended for agriculture in Romania, ensuring the correct implementation of direct payment schemes, as well as other support programs such as rural development measures, thus contributing to the support of farmers and communities agricultural, promoting investments in agricultural infrastructure, modernization of holdings and diversification of activities.

Lima and Cardenete investigated the effects of European funds on a regional economy, in a study for Andalusia from 2000-2006, and concluded that Community payments brought many benefits to the area [1]. Following their model, through the present research we aim to identify the importance of the payment agency for the economic development of Romania and the effects of European funds for the economy, by analyzing its activity at the national level and at the local level in Neamț county. To carry out the research, we analyzed the national and community legislation, as well as the official documents made available by the Ministry of Agriculture and Rural Development and by the Payments and Intervention Agency

for Agriculture. Numerous research endeavors are concentrated on investigating the elements that influence Romania's ability to utilize European Union funds, encompassing both the European and domestic perspectives [2] and on national level [3]. Economists contend that the agricultural sector serves a role beyond mere product supply and unlike numerous other commodities and services, agricultural goods possess a social dimension, accompanied by a societal demand that necessitates fulfillment [4-6]. The majority of these studies are oriented towards offering policy suggestions to enhance the absorption rate of European funds.

3. Results

According to official data, APIA uses the European funds - European Agricultural Fund for Rural Development (EAFRD) and European Agricultural Guarantee Fund (EAGF) and the national budget (NB) to support farmers and for the development of the agricultural sector in Romania [7]. These funds provide payments and subsidies to farmers, promote rural development, protect the environment and encourage the adoption of sustainable agricultural practices.

Although certain recipients of EAFRD benefits express concerns about the duration between submitting a funding proposal and its eventual approval, there is room to explore ways to expedite this process [8], and undoubtedly, these funds play a pivotal role in jumpstarting new enterprises, thereby actively fostering economic expansion within rural areas [9].

European funds represent a vital component in supporting Romanian agriculture and in ensuring a sustainable development of the agricultural sector in accordance with the regulations and policies established by the European Union:

- EAFRD

One of the main European funds used in Romania for agricultural payments is the European Agricultural Fund for Rural Development, with the objective of promoting rural development and supporting the diversification of agricultural activities, and implementing programs and measures aimed at modernizing and protecting the environment, as well as promoting the quality of agricultural products.

- EAGF

Romania also uses the European Agricultural Guarantee Fund to ensure financial support in the agricultural sector, a fund intended to support agricultural production and ensure the stability of the agricultural market in the European Union, and through this fund, APIA grants direct payments to farmers and finances specific programs, including market measures and agricultural insurance.

The Common Agricultural Policy (CAP) of the European Union represents the main financing framework for the agricultural sector in Romania and other member states, APIA playing a crucial role in the implementation of the CAP, ensuring the efficient distribution and management of European funds to the beneficiaries in the agricultural sector.

We will continue to follow the procedure for receiving applications for the granting of European funds through APIA. Applications are accepted annually from March 1st to May 15th via the Land and Parcel Identification System (LPIS). This program registers all applications submitted by farmers and economic agents, replacing manual registration systems. LPIS has modernized data management, computerized millions of hectares of land, supported the provision of e-services and e-mobilization, and improved the transparency and efficiency of fund utilization by beneficiaries.

In 2023, APIA implemented a simplified file submission procedure, with the aim of facilitating farmers' access to agricultural support, this new approach representing an important step towards streamlining and digitizing the application process, bringing benefits to both farmers and the institution. Having access to the institution's official data [10], we will present the procedure for submitting the file to APIA in 2023, highlighting the advantages and key stages of this change:

- in the context of digitization, farmers have the opportunity to access the online platform to start the file submission process, through a personal account, they can access all the necessary information, guides and relevant forms;
- farmers must ensure that they meet the eligibility criteria to apply for agricultural support and will prepare the necessary documents, such as identity documents, ownership or land use documents, as well as other specific documents depending on the chosen support program;
- the simplified filing procedure allows farmers to complete forms online, eliminating the need to fill out physical documents or visit APIA headquarters. These forms contain essential information about the holding, cultivated areas, animals owned and other relevant details;
- if additional documents are required, such as certificates of compliance or certificates, farmers can upload them electronically, this approach eliminates the need for physical submission of documents and reduces the time and effort involved in the application process;
- officials will carry out a check of the submitted files to ensure that they are complete and comply with the requirements of the chosen support program and if problems or ambiguities are identified, farmers will be notified and given the opportunity to correct or complete the information necessary;
- APIA will communicate the outcome of the evaluation of the files to the farmers and, if all the criteria are met, will initiate the payments. This communication will be done through the online platform, thus ensuring transparency and effective communication.

The simplified procedure for submitting the file to APIA in 2023 is a beneficial initiative for farmers, eliminating administrative barriers and reducing the time and effort required in the application process for agricultural support. Access to the platform, filling in online forms and submitting documents electronically facilitate the interaction of farmers with the institution, increasing the efficiency and transparency of the process. This approach represents an important step in the direction of modernization and adaptation to new technologies, contributing to the sustainable development and competitiveness of the agricultural sector in Romania.

The support measures implemented by APIA are:

- direct payments;
- coupled support schemes in the vegetable and animal husbandry sectors;
- market measures and promotion of agricultural products;
- environmental and climate measures;
- support for the creation of forested areas;
- support for silvoenvironment commitments;
- animal welfare measures;
- transitional national aids in the vegetable and zootechnical sector;

- state aid [11].

APIA also offers a series of support measures for the development and modernization of agriculture in Romania. These include:

- the measures contained within the National Support Program for the Wine Sector (NSPWS) to support the development of the winemaking sector in Romania and increase the quality and quantity of high-quality wines in Romania;
- subsidies for the neutralization of animal waste, which can be converted into organic fertilizer for plants;
- financial activities for the development of agricultural infrastructure and the restoration of lands affected by calamities.

APIA is an essential structure for Romanian agriculture and provides essential support for meeting the requirements and needs of the country's agricultural sector, provides important funds for Romanian agriculture and operates with professionalism and transparency.

Thus, during the 2007-2013 period, APIA achieved a 98% absorption rate of European funds relative to the annual financial allocation [7]. Although there were initial challenges, the utilization of these funds has significantly accelerated in recent years and Romania has effectively supplied the required public co-financing [12]. As can be seen in Table 1, the amounts absorbed by Romania have increased every year since 2007, even if the number of holdings has decreased.

Table 1

Funds spent, euros and number of farmers submitted APIA 2007-2016

Campaign	Total funds spent, euro	Number of farmers who submitted an application
Campaign 2007	749,126,908	1,241,934
Campaign 2008	1,057,324,142	1,130,404
Campaign 2009	1,182,866,854	1,122,046
Campaign 2010	1,404,305,740	1,093,167
Campaign 2011	1,523,890,364	1,088,809
Campaign 2012	1,716,175,762	1,079,899
Campaign 2013	1,808,696,364	1,048,728
Campaign 2014	1,911,776,088	1,027,874
Campaign 2015	2,088,057,161	944,076
Campaign 2016	Not available	901,268

Note: Source: developed by the authors based on [13].

Table 2

Funds spent, lei and number of farmers submitted APIA 2017-2022

Campaign	Funds spent, lei	Number of farmers who submitted an application
2017	14,903,674,170.79	884397
2018	13,988,795,361	866749
2019	14,835,611,096	846619
2020	16,559,771,685.77	830898
2021	15,599,905,275	815286
2022	Not available	790000

Note: Source: compiled by the authors based on APIA activity reports.

The significant evolution of the fund spent by APIA between 2007 and 2021, from 749,126,908 euros to 3,157,875,561 euros, indicates a substantial increase in the support given to Romanian agriculture and this increase could be interpreted as a positive sign of the government's commitment to the agricultural sector and the recognition of its importance to the economy.

According to official APIA data, in 2022 there were 36,417 young farmers registered, the amount for the 2022 campaign was 48.1398 euros/hectare, and the total amount authorized in the calendar year 2022 was 16,391,715.91 euros [14]. According to the data in Table 2, the total number of farmers who applied to APIA in 2022 was 790000, the number of young people representing 4.6%, which means a low percentage and additional measures should be taken to attract them to the agricultural sector.

Next, we will analyse APIA's activity in Neamț county in Romania and whether it brings benefits to the rural area.

To assess whether this activity is beneficial for the rural area, we outlined several aspects:

- 1) The agency's objectives are outlined in the European Union Common Agricultural Policy, with APIA Neamț implementing all the measures regulated by the specific legislation aimed at supporting farmers and rural development. These measures include direct payments to farmers, subsidies for young farmers, investments in agricultural infrastructure, and environmental protection schemes.
- 2) The economic impact of APIA's activity in Neamț County results from the allocation of sums of money through direct payments to farmers and support for investments in agricultural infrastructure that have a positive effect on the local economy, by stimulating the growth of agriculture, generating jobs and developing rural businesses.

In 2007, APIA Neamț County Centre received an impressive number of 34,810 applications for agricultural support. This reflects the importance given by the farmers in the area and their trust in the institution. According to the data in Table 3, in 2023, the number of submitted applications decreased significantly to 10,295, but the requested area for payment remained constant, which means that the amounts attracted increased.

Table 3

Number of farmers submitted APIA Neamț 2007 and 2023

Campaign	Number of farmers who submitted an application
2007	34810
2023	10295

Source: compiled by the authors according to APIA activity reports 2007 and 2023.

According to official data, in 2020, Neamț County Center APIA made payments to beneficiaries in the total amount of 40,342,661.95 euros [15], an important amount that reached the users of agricultural land and animal breeders.

Table 4 shows the amounts granted by APIA Neamț in 2020, by payment schemes, direct payments and payments for agricultural practices beneficial to the climate and environment having the highest amounts.

Table 4

**The situation of the amounts authorized for payment in 2020 on payment schemes,
APIA Neamț**

Scheme	Total	
	Lei	Euro
ANC_SEMN	3,831.37	801.06
ANC_SPEC	2,145.18	448.51
ANC_ZM	17,583,231.78	3,676,198.29
M10_P1	11,287,820.43	2,359,991.57
M10_P1.2.1	1,405,188.67	293,788.00
M10_P1.2.2	348,285.63	72,818.97
M10_P3.1.1	614,517.34	128,479.67
M10_P3.1.2	390,837.79	81,713.99
M10_P3.2.1	34,967.65	7,310.83
M10_P4	482,377.42	100,852.48
M10_P7	4,783.01	1,000.00
M10_P8_S	76,169.29	15,925.00
M11_S1_P1	1,131,590.66	236,585.81
M11_S1_P2	789.20	165.00
M11_S1_P3	363,417.10	75,981.00
M11_S1_P4	456.29	95.40
M11_S1_P5	785.61	164.25
M11_S1_P6.1	476,719.68	99,669.58
M11_S1_P6.2	833.82	174.33
M11_S2_P1	590,258.65	123,407.65
M11_S2_P2	5,875.20	1,228.36
M11_S2_P3	201,134.04	42,051.91
M11_S2_P4	549.85	114.96
M11_S2_P5	6,294.42	1,316.00
M11_S2_P6.1	175,927.23	36,781.77
M11_S2_P6.2	41,305.53	8,635.90
PPABCM	49,011,293.94	10,058,752.15
PR1	1,385,218.29	284,375.16
PR2	8,149,381.19	1,672,523.27
PTF	1,378,378.47	282,889.44
SAPS	83,922,112.05	17,223,624.55
SCZ_C	97,716.64	20,054.72
SCZ_O	4,109,857.27	843,480.05
SCZ_TC	1,116,010.79	229,042.76
SCZ_VL	11,509,916.98	2,362,219.56
Total	195,909,978.46	40,342,661.95

Note: ANC_SEMN – support for areas affected by significant natural constraints; ANC_SPEC – support for areas affected by specific natural constraints; ANC_ZM – support for areas affected by natural constraints - mountain area; M10_P1 – measure 10, package 1, high nature value meadows; M10_P1.2.1 – measure 10, package 1.2.1; M10_P1.2.2 – measure 10, package 1.2.2; M10_P3.1.1 – measure 10, package 3.1.1, important grasslands for birds; M10_P3.1.2 – measure 10, package 3.1.2; M10_P3.2.1 – measure 10, package 3.2.1; M10_P4 – measure 10, package 4, green crops; M10_P7 – measure 10, package 7, arable land important as feeding grounds for the red-necked goose; M10_P8_S – measure 10, package 8, rearing farm animals of local breeds at risk of abandonment; M11_S1_P1 – sub-measure 11.1 – support for conversion to organic farming methods, package

1; M11_S1_P2 – sub-measure 11.1 – support for conversion to organic farming methods, package 2; M11_S1_P3 – sub-measure 11.1 – support for conversion to organic farming methods, package 3; M11_S1_P4 – sub-measure 11.1 – support for conversion to organic farming methods, package 4; M11_S1_P5 – sub-measure 11.1 – support for conversion to organic farming methods, package 5; M11_S1_P6.1 – sub-measure 11.1 – support for conversion to organic farming methods, package 6.1; M11_S1_P6.2 – sub-measure 11.1 – support for conversion to organic farming methods, package 6.2; M11_S2_P1 - submeasure 11.2 – support for maintaining organic farming practices, package 1; M11_S2_P2 - submeasure 11.2 – support for maintaining organic farming practices, package 2; M11_S2_P3 - submeasure 11.2 – support for maintaining organic farming practices, package 3; M11_S2_P4 - submeasure 11.2 – support for maintaining organic farming practices, package 4; M11_S2_P5 - submeasure 11.2 – support for maintaining organic farming practices, package 5; M11_S2_P6.1 - submeasure 11.2 – support for maintaining organic farming practices, package 6.1; M11_S2_P6.2 - submeasure 11.2 – support for maintaining organic farming practices, package 6.2; PPABCM - payment for agricultural practices beneficial to the climate and environment; PR1 - redistributive payment 1-5 ha; PR2 - redistributive payment 5-30 ha; PTF - payment for young farmers; SAPS - single area payment scheme; SCZ_C – goat coupled support; SCZ_O – sheep coupled support; SCZ_TC – coupled support taurine meat; SCZ_VL – coupled support for dairy cows.

Source: developed by the authors based on [15].

Table 5 shows all payments made by APIA Neamț in 2020, payments that include, in addition to payment schemes, outstanding payments from previous years and other financial aid.

Table 5

Payments made in 2020 to APIA Neamț beneficiaries

	Amount, lei	Amount, euro
Total – all schemes	303,458,598.94	63,220,541.45

Source: developed by the authors based on [15].

The funds attracted by farmers from Neamț County have increased because the amounts granted are constantly increasing. Table 6 shows the amounts scheduled for the following years for the area payment.

Table 6

APIA SAPS planned amount 2023-2027

Year	Planned amount euro/ha
2023	96.47
2024	97.85
2025	99.27
2026	100.66
2027	103.06

Source: developed by the authors based on the National Strategic Plan [16].

- 3) By supporting young farmers, the agency contributes to the generational promotion of agriculture and maintaining life in rural areas, and by preserving traditions and the rural way of life, APIA's activity can contribute to social cohesion and the maintenance of cultural identity. The agency is a catalyst for young farmers who are starting their careers in agriculture in Europe, through initiatives and facilities tailored to their specific needs, young people are supported to embrace their passion for agriculture and realize their dreams.
- 4) Fruit and milk measures in schools also have a significant social impact, these measures encourage fruit and dairy consumption and help create healthy eating habits

for children in school institutions. APIA bridges the gap between farmers and schools through its fruit and milk distribution program. While children benefit from healthy food and nutritious snacks every day, local farmers enjoy a stable market and secure a sustainable income.

- 5) APIA implements measures that have beneficial effects on the rural environment, one of them being Measure 11 - support for ecological agriculture. Through the CAP reform, the goal was to create a European agriculture oriented toward the market and to place greater emphasis on environmental protection [17]. This reform is an important achievement towards a more modern and responsible European agriculture. Organic farming and changes in orientation demonstrate the commitment of EU member states to sustainable development and align with people's need to protect the natural environment and guarantee a prosperous future for agriculture. The amounts granted for the practice of ecological agriculture in 2022 were those in Table 7, and, according to official data, the total amount authorized in the calendar year 2022 for the entire country was 41,481,343.84 euros [14].

Table 7

Amounts granted by APIA 2022 measure 11, euro/ha/year		
	Submeasure 11.1	Submeasure 11.2
Arable land	293	218
Vegetables	500	431
Orchards	620	442
Vineyard	530	479

Source: developed by the authors based on [18].

- 6) Another important aspect of APIA's activity is the fact that the agency grants certificates for bank loans, and their granting can be considered an important step in the financial support of farmers. These certificates can serve as essential tools for farmers in obtaining bank loans necessary for the development and modernization of their agricultural businesses and can lead to the removal of financial and administrative obstacles that can prevent the development of agricultural businesses or the implementation of modernization projects. With the support and recognition of an official and specialized institution in the agricultural field, farmers can more easily obtain approvals and favorable conditions for bank loans. APIA's certification process may involve a rigorous assessment of the eligibility of beneficiaries and projects for which funding is sought, helping to ensure responsible use of funds and adequate monitoring of the progress and impact of supported agricultural projects.

Furthermore, we have aimed to discover the impact of European funds granted by APIA.

Thus, during the period 2018-2022, Neamț County experienced a significant oscillation in terms of the number of unemployed individuals, showing a general downward trend, Table 8. This phenomenon is a result of labor market dynamics, which can also be influenced by European funds allocated for the economic and social development of the county. These funds have contributed to stimulating investments in various sectors, improving infrastructure, supporting entrepreneurship, and creating job opportunities, thereby contributing to the reduction of unemployment.

Table 8

Unemployment Numbers in Neamț County, 2018-2022

year	numbers
2018	8153
2019	7346
2020	9034
2021	6483
2022	5495

Source: developed by the authors based on [19, 20].

During the period between 2016 and 2020, there was a significant increase in the number of young farmers in Romania, highlighting a possible positive influence of European funds and policies aimed at supporting young agriculture in the development of this segment of the agricultural sector (Table 9).

Table 9

Young Farmers, Romania, 2016, 2020

Year	Numbers
2016	41220
2020	155740

Source: developed by the authors based on [21].

The consistent increase in the amounts allocated by APIA for Measure 11 - organic agriculture in Romania during the period 2017-2021 reflects a strong commitment to the development and promotion of a more sustainable agricultural model. This model contributes to the conservation of biodiversity, the protection of the environment, and the provision of high-quality food products, aligning with environmental and public health objectives at both the national and European levels (Table 10).

Table 10

Amounts Granted by APIA, Romania, Measure 11 - Organic Agriculture 2017-2021, Million Euros

Year	Amount
2017	47,57
2018	33,87
2019	61,8
2020	80,5
2021	97,5

Source: developed by the authors based on [22-25].

The main conclusion based on the data from Table 11 is that, between the years 2016 and 2020, APIA significantly increased the financial support provided to young farmers in Romania. This increase reflects a strong commitment to promoting and supporting the new generation of farmers, thereby contributing to the sustainability and continuity of agriculture in the country.

The analysis of the impact of European funds granted by APIA reveals a series of significant developments in Neamț County and the agricultural sector in Romania.

Table 11

Amounts Granted by APIA, Romania, Young farmers, Euro/ha

Year	Amount
2016	22,87
2020	36,61

Source: developed by the authors based on [27, 28].

These funds have contributed to the reduction of unemployment in Neamț County, reflecting their positive influence on the local labor market. Additionally, there have been clear signs of growth in the young farmer segment, suggesting that the policy supporting young agriculture and European funds have had a beneficial effect on attracting the younger generation to farming. As for organic agriculture, the consistent and increasing allocation of funds by APIA has underscored Romania's commitment to developing a more sustainable and environmentally-friendly agricultural model.

4. Discussion

APIA is a key institution in Romania, responsible for the administration and implementation of agricultural support policies, having a significant role in supporting farmers and the agricultural sector in general and playing an essential role in ensuring a sustainable and prosperous development of Romanian agriculture. With a mission to ensure equity and efficiency in the distribution of European funds intended for agriculture, the agency makes a significant contribution to the development and modernization of the agricultural sector.

There are several possible reasons for the decrease in the number of applications for subsidies in Neamț County and in Romania in general:

- **Modernization and diversification:** In recent years, Romanian agriculture has gone through a process of modernization and diversification, with many farmers investing in advanced technologies, irrigation systems and high-performance equipment, which has reduced the need for additional support.
- **Agricultural policy changes:** Agricultural policies and support programs from the European Union and the Romanian government have changed over time, these changes influencing the way farmer's access and request European money.
- **Migration of the rural population:** The migration of the rural population to urban areas or other fields of activity is a factor that contributes to the decrease in the number of applications, with agriculture becoming less attractive for some people, and this can be reflected in the number of applications submitted.
- **Absorption of small farmers by big ones in terms of filing.** It is important to approach this issue with caution and to understand that not all situations of absorption of small farmers by large ones are negative or disadvantageous. There are cases where collaboration between small and large farmers can bring mutual benefits, such as sharing knowledge, access to advanced technologies and improving the agri-sector's outcome. However, there are possible negative consequences of the absorption of small farmers, with the risk of small farmers being marginalized or even closing their agricultural businesses due to strong competition from large farmers who have more resources and financial capacity.

5. Conclusions

In light of these changes, it is important that the agency and competent authorities consider the following recommendations to maintain agricultural support and stimulate farmers' interest:

- Information and education: comprehensive information and agricultural education should be constantly provided to farmers, more training sessions, seminars and informative materials to help farmers understand the new agricultural policies, eligibility criteria and benefits offered.
- Promotion of benefits: actively promoting the benefits of agricultural support programs through awareness campaigns, success stories and case studies that highlight the positive impact of support on farmers and agricultural communities.
- Supporting innovation and sustainable development: encouraging innovation and sustainable development in agriculture can be done by providing additional support or bonuses for ecological agricultural practices, adopting advanced technologies and diversifying production.
- Constant monitoring and evaluation: APIA should carry out constant monitoring and evaluation of agricultural support programs to ensure their effectiveness and relevance, feedback from farmers and analysis of results can provide valuable information for continuous improvement of programs.

Conflicts of Interest: The authors declare no conflict of interest.

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Citation: Copăceanu, C.; Mazăre, S. Analysis and impact of APIA activity in the development and support of the agricultural sector in Romania. *Journal of Social Sciences*. 2023, 6 (3), pp. 42-54. [https://doi.org/10.52326/jss.utm.2023.6\(3\).03](https://doi.org/10.52326/jss.utm.2023.6(3).03).

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Submission of manuscripts:

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[https://doi.org/10.52326/jss.utm.2023.6\(3\).04](https://doi.org/10.52326/jss.utm.2023.6(3).04)
UDC 336.73:338.124.4(478)"2009/2023"



MICROFINANCE INSTITUTIONS IN TIMES OF ECONOMIC CRISIS. CASE OF REPUBLIC OF MOLDOVA

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Received: 08. 12. 2023

Accepted: 09. 10. 2023

Abstract. The article explores the performance of microfinance institutions during economic disruptions, highlighting their crucial role in financial inclusion and entrepreneurship. Focusing on the Republic of Moldova between 2009-2023, the study uses data from national financial bodies to evaluate key metrics, including loan growth and gross domestic product rates. Results showcase the microfinance sector's consistent growth, directly linked to economic progress and increasing credit demand. Furthermore, the sector significantly boosted financial inclusion, evident from the growing number of beneficiaries and their loan sizes. Notably, microfinance institutions exhibited robust performance during economic crises, such as the COVID-19 pandemic and the Ukraine War, sustaining continuous growth even amidst local economic contractions. However, the study also points to certain limitations, suggesting a deeper look into the effects of regulatory measures and the promise of technology-driven innovations on the sector's future.

Keywords: *non-bank financial institutions, economic disruptions, financial inclusion.*

Rezumat. Articolul explorează performanța instituțiilor de microfinanțare în timpul perturbărilor economice, evidențiind rolul lor esențial în incluziunea financiară și antreprenorial. Concentrându-se pe Republica Moldova între 2009-2023, studiul folosește date de la organismele financiare naționale pentru a evalua indicatori cheie, inclusiv creșterea împrumuturilor și ratele produsului intern brut. Rezultatele arată creșterea consecventă a sectorului de microfinanțare, direct legată de progresul economic și creșterea cererii de credit. În plus, sectorul a stimulat semnificativ incluziunea financiară, evidentă din numărul în creștere de beneficiari și dimensiunile împrumuturilor lor. Remarcabil este faptul că instituțiile de microfinanțare au arătat performanța în timpul crizelor economice, cum ar fi pandemia de COVID-19 și Războiul din Ucraina, susținând o creștere continuă chiar și pe fondul contracțiilor economice locale. Cu toate acestea, studiul indică și anumite limitări, sugerând o analiză mai profundă a efectelor măsurilor regulatorii și a promisiunii inovațiilor tehnologice asupra viitorului sectorului.

Cuvinte-cheie: *instituții financiare non-bancare, perturbări economice, incluziune financiară.*

Abbreviations:

Microfinance institutions – MFIs;

National Commission for Financial Markets – NCFM;

Gross Domestic Product – GDP;

Return on Equity – ROE.

1. Introduction

Microfinance institutions provide financial services to low-income, economically active, borrowers who seek relatively small amounts of funding to support their businesses, handle emergencies, acquire assets, or manage their expenses [1]. These borrowers typically lack credit histories and collateral, which restricts their access to financial services from traditional commercial banks [2]. Due to this, MFIs are considered essential in creating economic opportunities and alleviating poverty. Recognizing the significance of microfinance in achieving the millennium development goals, numerous donors emphasized its importance, leading to the United Nations declaring 2005 as the “year of micro-credit” [3,4].

In recent decades, the world has witnessed the rise of MFIs from humble beginnings to powerful agents of change. The historical roots of microfinance can be traced back to the visionary work of Nobel laureate Muhammad Yunus and the establishment of the Grameen Bank in Bangladesh. Since then, microfinance has grown exponentially, with an extensive network of MFIs operating in various regions, reaching clients at the grassroots level, and catering to the diverse financial needs of the unbanked and marginalized.

Microfinance institutions play a significant role in promoting economic stability by fostering financial inclusion, supporting micro-entrepreneurs, and enhancing the overall resilience of the economy. Their contributions go beyond simply providing access to credit; they address the root causes of poverty, create avenues for income generation, and facilitate sustainable economic growth. MFIs primarily target the unbanked and underserved population, providing them with access to formal financial services. J. Morduch concludes that “there is ample evidence to support the positive impact of microfinance on poverty reduction and on income smoothing” [3]. Katsushi et al. suggest that microfinance significantly reduces poverty at macro level and thus reinforce the case for channelling funds from development finance institutions and governments of developing countries into MFIs [4]. Meyer’s analysis of MFIs in India revealed that microfinance can contribute to poverty alleviation and food security through supplying loans that enhance investment, reduce the cost of self-insurance and contribute to consumption smoothing [5].

Microfinance institutions often focus on serving local communities, making them intimately familiar with the economic landscape and specific needs of their clients. A study from Sharma and Puri shows a significant impact of microloans on GDP of India [6]. In the research conducted by Sultan and Masih the Auto-Regressive Distributive Lag time series technique was employed to analyse data from Bangladesh, the birthplace of microfinance. The findings indicate a strong bidirectional relationship between microfinance and economic growth, highlighting the pivotal role of microfinance as a catalyst for growth through various channels [7]. Apere’s empirical evidence suggests that microfinance bank loans and domestic investment have a significant positive impact on Nigeria’s economic growth. Furthermore, the analysis indicates a long-term relationship between microfinance bank loans, investment, and economic growth in Nigeria [8].

By promoting financial inclusion, supporting micro-entrepreneurs, and fostering local economies, MFIs contribute significantly to overall economic stability and sustainable development.

Throughout this evolution, MFIs have undergone trials of their own, navigating through past economic downturns such as the Asian financial crisis of 1997 and the global financial crisis of 2008. Several studies have examined the resilience of MFIs during periods of economic instability. Silva and Chávez [9] explored the challenges faced by MFIs during economic turbulence and found that MFIs in countries with stronger institutions and governance fared better during the crisis, benefiting low-income individuals they serve. Gupta and Mirchandani [10] conducted a case study in India to understand the impact of economic downturns on microfinance clients. The research revealed that economic turbulence adversely affected clients' businesses and loan repayment capacities, underscoring the need for flexible loan terms and client support during crises.

The relationship between financial inclusion and economic stability has been explored by Lee et al. [11] who highlighted the significant role MFIs play in achieving these goals. The study revealed that MFIs contribute to poverty reduction, job creation, and overall economic development, making them vital actors during times of economic turbulence.

The adoption of digital financial services by MFIs to enhance resilience has been studied by Khan et al. [12]. The research emphasized that technology-driven processes, such as mobile banking and digital payments, improve MFI efficiency, outreach, and risk management, thereby contributing to their resilience during economic uncertainties.

Studies on MFIs' performance during major economic events have provided valuable insights. Martínez [13] examined the role of MFIs during the global financial crisis of 2008 and found that they were more resilient than traditional banks, continuing to provide essential financial services to clients in need.

The impact of the COVID-19 pandemic on MFIs was explored by Chen and Junru, [14]. The study's findings indicated that the COVID-19 pandemic had a negative impact on the financial efficiency of MFIs, but it had a positive effect on their social efficiency, likely because they continued to provide essential financial services and support to their clients in need during the pandemic. The interest rates charged by MFIs for their loans influenced their overall efficiency during the pandemic.

Khalaf and Saqfahait [15] found that MFIs have no effect on improving economic growth in Arab countries based on panel data model for six Arab countries over the period 1999-2016. Study conducted by Donou-Adonsou [16] delves into the macroeconomic implications of microfinance loans and reveal that the growth of microfinance loans has a positive and statistically significant impact on both economic growth and total factor productivity. However, the evidence regarding the influence of microfinance loan growth on investment and education is not substantial. The study suggests that while microfinance loans can contribute to income growth in developing countries, the process may occur at a gradual pace.

Recent events, such as the COVID-19 pandemic and the conflict in Ukraine, emphasize the challenges faced by MFIs during global economic crises. The war in Ukraine has led to a significant humanitarian crisis, displacing millions, and creating an urgent need for aid. Globally, the conflict disrupted commodity markets, trade, financial flows, and investor confidence, resulting in capital outflows and increased borrowing costs for many commodity-importing emerging economies. Neighbouring regions, like Moldova, grapple with the impact

of lower remittances, while disruptions to supply chains and financial networks weaken regional economic growth.

Meanwhile, as the world faced uncertainty, the livelihoods of numerous micro-entrepreneurs and vulnerable individuals were at risk. In this challenging context, MFIs demonstrated their commitment and responsiveness by swiftly adapting their services. They provided support through flexible loan terms and digital financial solutions, not only safeguarding livelihoods but also serving as a stabilizing force for local economies.

The topic of MFIs and their performance during economic crises is highly important in the current global context, particularly for financial inclusion and poverty alleviation. Recent global events like the COVID-19 pandemic and regional conflicts, such as the one in Ukraine, have increased the urgency for MFIs to respond to emergencies and aid their clients, underscoring the relevance of this research.

In our study on microfinance in the Republic of Moldova, we aim to achieve the following **research objectives**:

- Evaluate sector growth: Analyze the growth and performance of the microfinance sector in Moldova, with a focus on key financial indicators.
- Evaluation of regulatory changes: Assess the impact of the latest of the regulatory framework changes governing microfinance institutions in Moldova.
- Evaluate sector performance during period of economic crisis.

While the global microfinance movement has received extensive research attention, there is a noticeable absence of recent studies dedicated to the microfinance sector in Moldova. This gap is particularly worrisome, given the dynamic nature of Moldova's economic landscape and the challenges it has faced, including the COVID-19 pandemic and the conflict in neighboring Ukraine

2. Materials and Methods

Data Collection Methods: Considering the empirical nature of the study and the utilization of macroeconomic indicators, the analysis is conducted using *secondary data*, i.e., data that has been previously collected for purposes other than those of this project.

Data Sources include *external type of data* i.e. reports and statistical materials published for public use, obtained from international organizations, governmental bodies, research, and scientific centres and namely: National Bank of Moldova, National Statistics Bureau, and National Commission for Financial Markets.

In addition to these external data sources, the author conducted a comprehensive *literature review* within the field. This involved the analysis of academic papers, reports, and relevant publications to acquire a profound and comprehensive understanding of the subject matter.

Furthermore, to gain insights into the regulatory framework governing the microfinance sector, the author conducted a thorough examination of relevant legislation. This legal analysis aimed to understand the legal context within which microfinance institutions operate and to identify.

Data Utilization methods. After collecting the data and conducting measurements, organization (systematization), and subsequent data analysis were performed. This analysis involved examining trends, growth rates, and changes in financial indicators over time. Statistical analysis techniques, including time-series analysis, were employed to assess their impact on the microfinance sector's performance. The study also included comparing the

performance of different financial institutions, such as banks and microfinance institutions, to understand their respective contributions to the financial sector's growth and stability.

Logical Reasoning Methods: The author employed logical reasoning methods such as induction and deduction. These methods were used to develop logical arguments and draw inferences based on the collected data and information.

Data: The study used data on the volume of loans granted by microfinance institutions and banks to individuals and businesses over the years 2009 to 2023Q1. Data on the annual GDP growth rate have been used to analyse the correlation between economic growth and the expansion of the micro financial sector. Information on the number of beneficiaries of loans from microfinance institutions, as well as banks, have been utilized to examine the reach and impact of financial services on the population. Data on the profit and Return on Equity (ROE) of the microfinance sector was calculated by the author to assess the sector's financial performance and profitability over time.

3. Challenges and Opportunities Ahead for Microfinance Institutions

While microfinance institutions have made significant strides in promoting financial inclusion and economic development, they face several challenges and opportunities that will shape their future trajectory. Addressing these challenges and capitalizing on the opportunities will be crucial for MFIs to maintain their impact and resilience in the ever-changing global landscape.

Challenges:

1. **Over-Indebtedness:** One of the primary challenges faced by MFIs is the risk of over-indebtedness among clients. In some cases, borrowers may take loans from multiple sources, leading to unsustainable debt burdens. Preventing over-indebtedness requires better credit assessment practices, financial education for clients, and responsible lending practices by MFIs.

2. **Risk Management:** MFIs operate in environments with varying degrees of economic and political stability. Managing credit risks, liquidity risks, and operational risks becomes more complex during economic downturns. Effective risk management practices and the establishment of robust risk management frameworks are essential to mitigate these challenges.

3. **Funding and Capital Constraints:** Many MFIs rely on external funding from donors, investors, and financial institutions to sustain their operations. Securing stable and affordable funding remains a significant challenge, especially during times of economic uncertainty. Diversifying funding sources and attracting long-term investment will be critical for MFIs' sustainability.

4. **Regulation and Compliance:** As MFIs expand their reach and service offerings, navigating regulatory frameworks becomes more challenging. Striking a balance between regulatory compliance and the need to serve vulnerable populations can be complex. Regulatory support that fosters responsible innovation while ensuring client protection is vital for MFIs' growth.

5. **Technological Integration:** While technology presents numerous opportunities for MFIs, integrating digital solutions can be challenging, especially in regions with limited internet connectivity and digital literacy. Ensuring secure and user-friendly digital platforms and providing training to both staff and clients will be crucial for successful technological integration.

Challenges ahead for microfinance institutions will require adaptive strategies, innovative solutions, and a strong commitment to their social mission. Embracing technological advancements, building resilient risk management systems, and fostering collaborations will be essential to overcoming challenges and capitalizing on opportunities. By staying true to their core values while embracing responsible innovation, MFIs can continue to drive positive change, promoting financial inclusion, and contributing to long-term economic stability and development.

4. Microfinance capital Market in the Republic of Moldova

The Republic of Moldova is home to over 160 microfinance institutions that have shown resilience during economic turbulence. Like many other countries, Moldova has faced economic challenges, including recessions, currency devaluations, and external shocks, which put the financial stability of its citizens and businesses at risk. However, the microfinance sector in Moldova has played a crucial role in providing support and stability to vulnerable populations during such periods.

Non-bank financial institutions in Moldova are supervised by the National Commission for Financial Markets established in 2007 through the merger of various non-bank supervisory agencies. The NCFM operates as an independent body of central public administration that directly reports to the Parliament. Its primary role is to regulate and authorize the activities of professional participants in the non-banking financial market and ensure their compliance with relevant legislation. The main objectives of this Commission are to enhance the stability, transparency, security, and efficiency of the non-banking financial sector. This is achieved through the establishment and maintenance of a suitable regulatory and supervisory framework for financial market participants, aiming to reduce systemic risks and prevent disloyal, abusive, and fraudulent practices in the financial sector, with the overarching goal of safeguarding the interests of clients and investors.

The authority of the National Commission for Financial Markets extends to various entities and institutions operating in the non-banking financial market. These include issuers of securities, investors, participants defined by the securities market legislation, insurance companies, insurance brokers, non-state pension funds, micro-financing organizations, savings and loan associations, mortgage credit organizations, and credit history bureaus. The policy framework for MFIs in the Republic of Moldova is regulated by Law № 202 on Credit Agreements with Consumers. This law aims to establish the necessary legal framework to ensure the protection of consumers' economic interests by creating fair conditions for obtaining consumer credits and setting guidelines for responsible behaviour among creditors when providing consumer credits.

Over the years, the main indicators of financial depth in the Republic of Moldova have significantly improved and are now broadly on par with countries at similar levels of development (Figure 1). Currently, there 155 microfinance institutions operating in the country. The number of financial service points has increased substantially, and geographical location is no longer a barrier to accessing financial services. The volume of issued loans increased 8 times from 1.3 billion MDL in 2009 to 11.8 billion MDL in Q1 2023, suggesting a steady and sustainable growth.

Let's analyze the data provided in Figure 2 for the years 2009 to Q1 2023 for both the loans growth rate and GDP growth rate. The loans growth rate (in current prices) showed positive growth throughout the years, with fluctuations in the rate of increase.

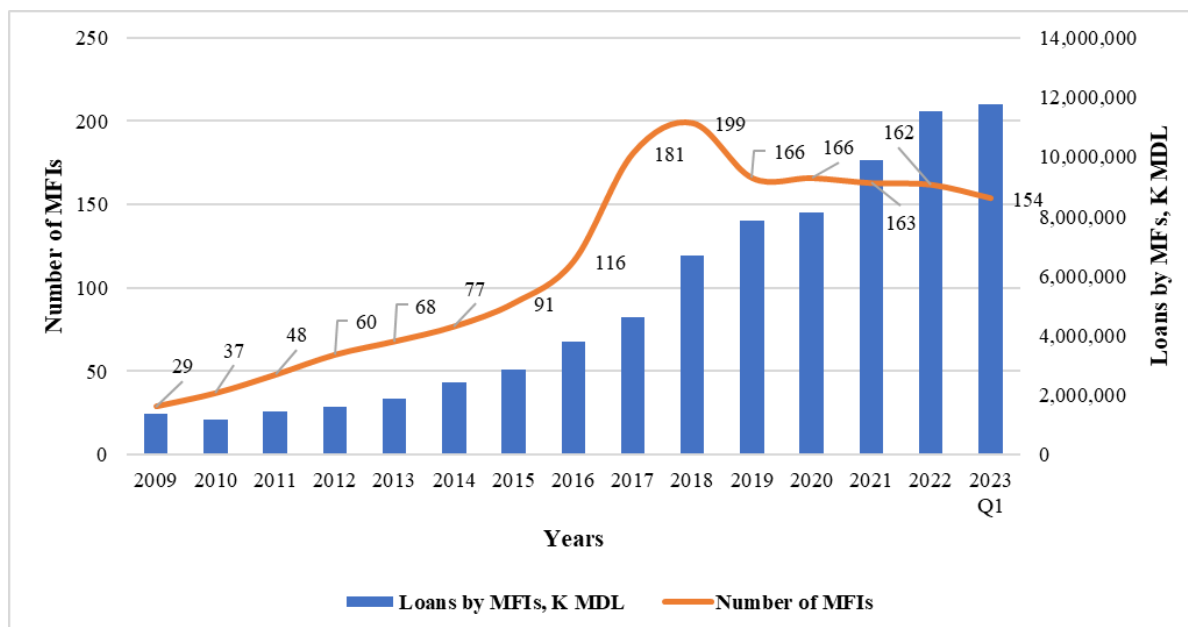


Figure 1. Dynamics of microfinance market volume and number of MFI in Republic of Moldova 2009-2023Q1.

Source: Developed by the author based on National Commission for Financial Markets.

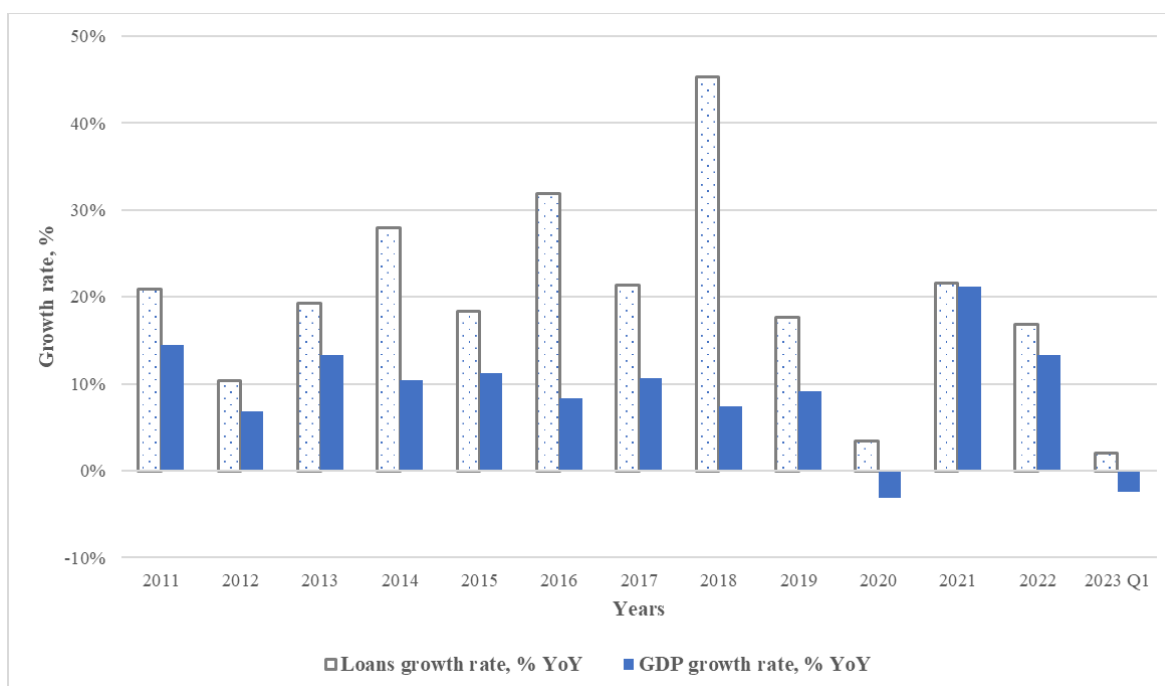


Figure 2. Microfinance loans growth rate vs GDP growth rate in Republic of Moldova 2011-2023Q1.

Source: Developed by the author based on National Commission for Financial Markets, National Bank of Moldova.

From 2011 to 2013, the growth rate remained relatively high, with percentages of 20.9%, 10.4%, and 19.3%, respectively. In 2014, the loans growth rate increased significantly to 28.0%, indicating a substantial expansion in loans issuance. The growth rate slightly decreased in 2015 to 18.4% but rebounded in 2016 with a growth rate of 31.8%, representing a rapid increase in loans. In 2017 and 2018, the loans growth rate remained elevated at 21.4% and 45.3%, respectively, showing continued strong growth in loans issuance. In 2019, the growth rate moderated to 17.7%, still indicating a healthy expansion of loans. The year 2020 saw a further slowdown in the loans growth rate to 3.4%, influenced by the challenges posed

by the COVID-19 pandemic on the economy and new provisions of the „Law on Credit Agreements with Consumers”, whereas any imposition of fees (including interest, commissions, charges, penalties, etc.) exceeding the contract amount is prohibited. Moreover, applying an interest rate exceeding 50% is also prohibited, and other related credit payments per day (commissions, charges, penalties, overdue interest, etc.) except for interest cannot exceed 0.04% of the total loan amount. However, loans growth rebounded in 2021, with a growth rate of 21.6%, and maintained a positive trend in 2022 with a growth rate of 16.8%.

The GDP growth rate experienced fluctuations over the years, but generally showed positive growth. Only the year 2020 was an exception, with a negative GDP growth rate of -3%, largely due to the impact of the COVID-19 pandemic on the global economy. However, the economy rebounded strongly in 2021, with a GDP growth rate of 21%. The data for 2022 shows a GDP growth rate of 13%. In the first quarter of 2023, Moldova's GDP, even in current prices, decreased by 2.4% as the Moldovan economy contracted further. This contraction was attributed to several factors, including rising living costs, the negative impact of the war, disruptions in export and logistical chains, and more restrictive monetary policies than expected. Despite these challenging conditions, the market volume of MFIs (Microfinance Institutions) increased by 2% compared to the end of 2022.

Overall Analysis. The loans growth rate demonstrated a general higher upward trend over the years than GDP growth rate, with varying rates of increase, showcasing an increasing demand for credit and financing in the economy. Furthermore, the GDP growth rate displayed positive growth in most years, indicating overall economic expansion, except for a downturn in 2020 due to the pandemic and in Q1 2023 due to the Ukraine war.

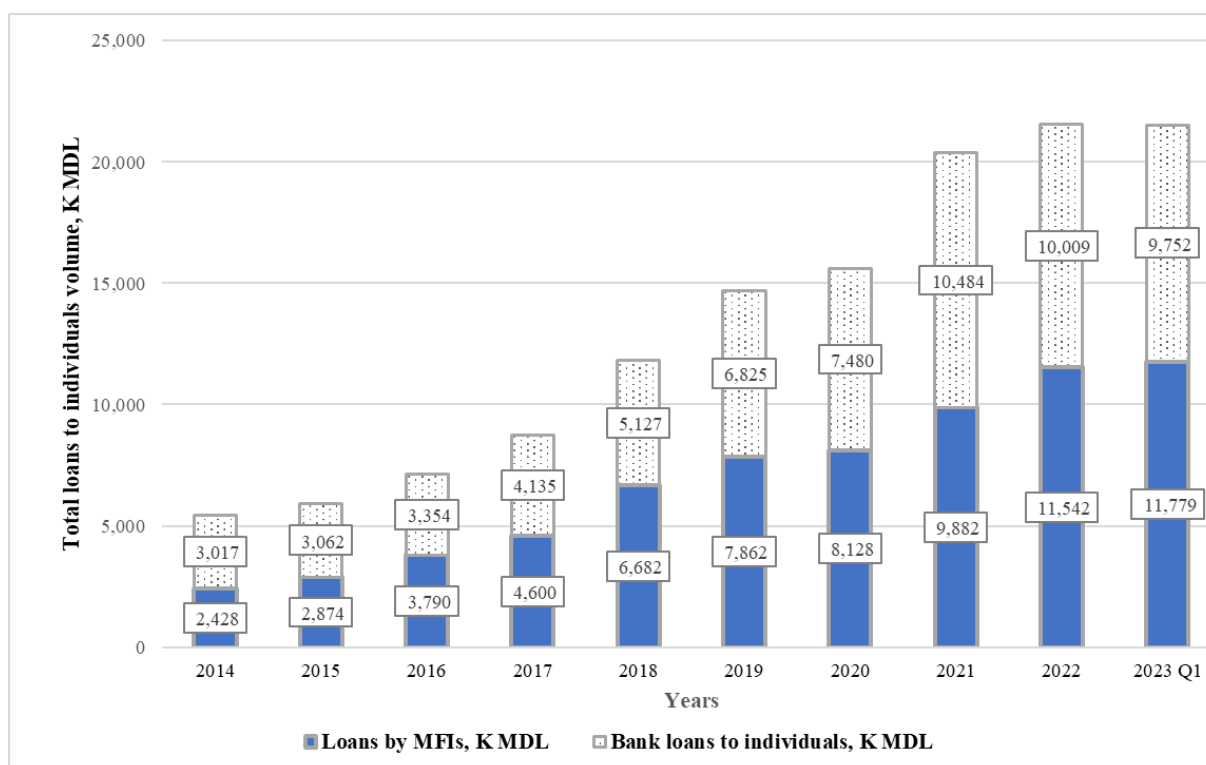


Figure 3. Comparison of microfinance and banking individuals loans market volume in Republic of Moldova 2014-2023Q1.

Source: Developed by the author based on National Commission for Financial Markets, National Bank of Moldova.

The positive correlation between loans growth and GDP growth suggests that credit availability and financial services play a crucial role in supporting economic development and growth.

Overall, the data shows that MFIs consistently expanded their lending to individuals over the years (Figure 3), and their share in the total loans to individuals fluctuated between approximately 44.6% and 56.6%. Banks also increased their lending, but the share of MFI's loans in the total loans remained significant and showed a slight overall increase over the years.

- The loan volume from MFIs to individuals has shown steady growth over the years, starting from 2,427,513 thousand MDL in 2014 and reaching 11,542,480 thousand MDL in 2022.
- Similarly, bank loans to individuals also experienced continuous growth during the same period, starting from 3,016,662 thousand MDL in 2014 and reaching 10,009,480 thousand MDL in 2022.
- The share of MFI's loans in the total loans to individuals fluctuated over the years, ranging from approximately 44.6% in 2014 to 56.6% in 2018.
- However, the share of MFI's loans declined slightly in the following years, dropping to approximately 48.5% in 2021. Subsequently, it rebounded to approximately 53.6% in 2022 and further increased to 54.7% in Q1 2023. During this time, bank financing decreased both in value and in its share of the overall financing market.
- MFIs consistently showed strong growth in loans to individuals, with the highest growth rate recorded in 2018 at 45.3%.

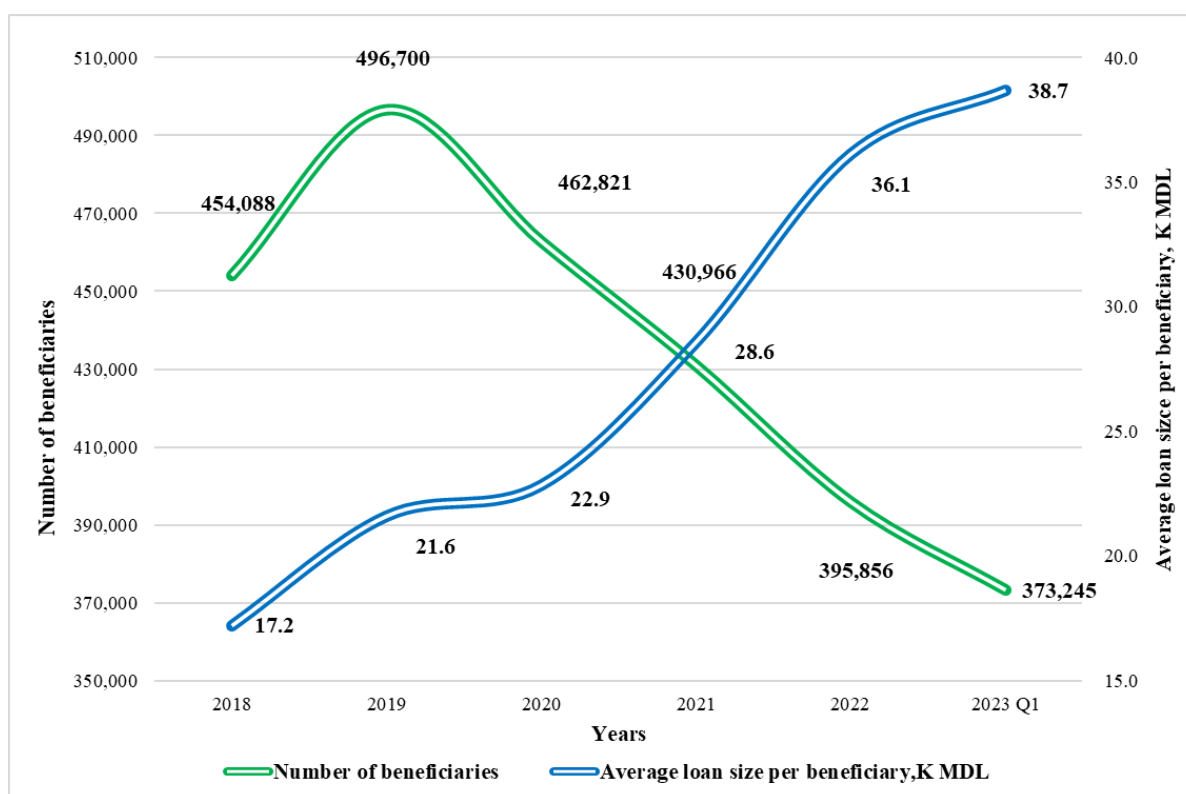


Figure 4. Comparison of the number of beneficiaries and the average loan size per beneficiary in the MFI market in the Republic of Moldova during 2014-2023Q1

Source: Developed by the author based on National Commission for Financial Markets.

- Bank loans to individuals also grew steadily, with the highest growth rate of 21.4% recorded in 2017.

Overall, the data indicates a positive trend in loans to individuals from both MFIs and banks, with MFIs' lending share remaining significant over the years. The steady growth in loans to individuals reflects an increasing demand for credit and financial services in the country, fostering economic activities and supporting individual financial needs.

The number of beneficiaries of loans (Figure 4) showed fluctuations over the years, with a slight increase from 2018 to 2019, followed by a decline in 2020-2023 Q1. Despite the fluctuations in the number of beneficiaries, the average loan size per beneficiary consistently increased from 17 thousand MDL in 2018 to 38.7 thousand MDL in 2023 Q1. The rising average loan size per beneficiary indicates a more substantial financial support over time and that individuals have been accessing higher-value loans. The combination of the changing number of beneficiaries and the increasing average loan size per beneficiary indicate shifts in market demand, economic conditions, and the availability of credit. It's important to note that changes in the number of beneficiaries and average loan size were influenced by various factors, including economic conditions and regulatory policies.

The MFI sector in the Republic of Moldova showed consistent growth in profit over the years, with some fluctuations. The sector's profitability, as measured by ROE, also showed variations but generally demonstrated strong performance. The highest profit and ROE were recorded in 2020, indicating a period of robust financial performance for the MFI sector. The decline in profit and ROE in 2021 was influenced by various factors, such as economic post Covid 19 conditions and regulatory changes. The rebound in profit and ROE in 2022 indicates a recovery and resilience of the MFI sector. However, in 2023, due to the consequences of the Ukraine war, economic contraction, and high financing costs, ROE declined to 6.5%

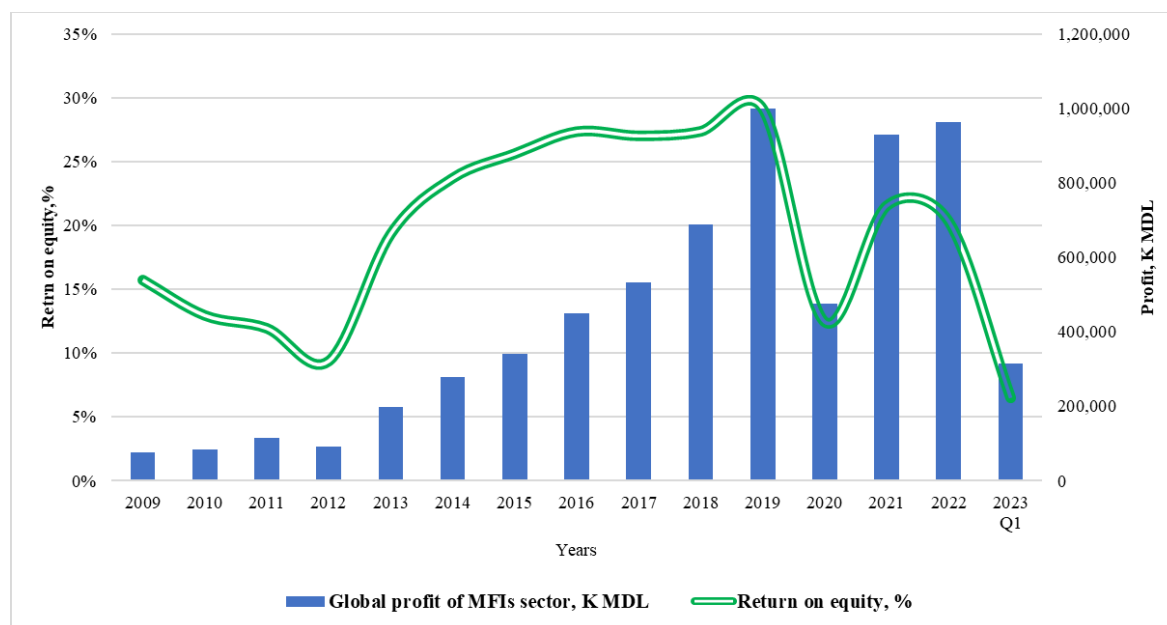


Figure 5. Return on equity and total volume of MFIs sector in Republic of Moldova 2009-2023Q1.

Source: Developed by the author based on National Commission for Financial Markets.

The MFI sector in Moldova has shown consistent growth in profit over the years (Figure 5), with profits increasing gradually from 77,132 thousand MDL in 2009 to 929,846 thousand MDL in 2022. However, there have been fluctuations in profit levels during this period.

The sector's profitability, as measured by ROE, has demonstrated strong performance, with ROE ranging from 9.4% in 2012 to 29.1% in 2020. Although there have been some fluctuations, the overall trend indicates efficient profit generation from shareholders' equity.

5. Discussions

The findings of this study shed light on the dynamic landscape of the microfinance sector in the Republic of Moldova, as well as its implications on economic growth, financial inclusion, and regulatory effectiveness. In this section, we discuss the results in the context of previous studies, the working hypotheses, and the broader implications. We also acknowledge the limitations of this work and suggest potential avenues for future research.

Interpreting the Results: Our analysis revealed significant growth in the microfinance sector, with the volume of granted loans increasing substantially over the years. This growth is in line with previous studies that have highlighted the growing importance of microfinance institutions in providing financial services to underserved populations. The rise in loan size per beneficiary indicates that individuals are accessing larger loans, potentially signalling improved financial capabilities and the sector's ability to cater to diverse financial needs.

Comparison with Previous Studies: The findings of our study align with prior research that has emphasized the positive relationship between economic growth and credit demand. The observed correlation between GDP growth rates and loan growth rates suggests that economic expansion has stimulated credit uptake, supporting entrepreneurial activities and investment.

Implications: The strong ROE of the microfinance sector demonstrates its profitability and efficiency. This implies that MFIs are effectively utilizing their equity capital to generate profits. The sector's resilience, as reflected in the rebound of profit and ROE in 2022, suggests its ability to withstand economic fluctuations and navigate challenging times. The regulatory improvements and the role of the National Commission for Financial Markets have contributed to the sector's stability and consumer protection. However, certain limitations still exist, requiring further adjustments to ensure a robust and inclusive financial system.

Limitations and Future Research: One limitation of this study is the reliance on open-source data, which may have some inherent biases or data gaps. Future research could explore the possibility of utilizing primary data collection methods for a more comprehensive analysis. The study focused on the microfinance sector's overall performance, but further research could delve into specific factors influencing loan demand, such as borrower demographics, sectoral preferences, and regional disparities.

Future Directions: Future research could investigate the impact of specific regulatory interventions on the microfinance sector's stability and its role in fostering economic growth. Additionally, exploring the potential of technology-driven financial innovations and their effects on financial inclusion and efficiency would be valuable.

6. Conclusions

The strong performance of microfinance institutions in times of economic turbulence reflects their unwavering commitment to financial inclusion and poverty alleviation. Throughout history, MFIs have demonstrated their adaptability, innovation, and support for clients during uncertain economic periods, providing stability and empowerment to vulnerable populations. During economic crises, MFIs have served as beacons of hope for their clients, offering flexible loan terms, digital financial services, and risk management strategies. By supporting micro-entrepreneurs and small businesses, MFIs have played a vital

role in maintaining economic activity and stability, especially in regions with limited access to traditional banking systems. While MFIs face challenges such as over-indebtedness, funding constraints, and regulatory complexities, they also encounter exciting opportunities for growth and impact. Integration of technology, product diversification, and sustainable finance initiatives offer avenues to extend their reach and drive positive change. As the global community emphasizes financial inclusion and sustainable development, MFIs stand ready to play a pivotal role. Leveraging technology, fostering collaborations, and delivering client-centric solutions will be crucial in reaching more unbanked and underserved individuals, promoting economic stability, and lifting millions out of poverty.

The case of the Republic of Moldova highlights the instrumental role of MFIs in supporting micro-entrepreneurs and vulnerable populations during economic turbulence. Positive performance in profitability and growth underscores the sector's potential, though vigilance in monitoring market dynamics and regulatory changes is essential for sustainable growth. Strengthening the regulatory framework and addressing supervision issues will further enhance consumer protection and financial stability. Our study showed that during periods of economic crises caused by events like the COVID-19 pandemic or the Ukraine war, when the economic situation deteriorated and GDP declined, MFIs continued to demonstrate growth. The impressive performance of MFIs amidst economic challenges underscores their dedication to adopting innovative strategies and prioritizing the needs of their clients. Their focus on responsible lending, risk management, and financial education ensures support for vulnerable populations and economic stability. As the economic landscape evolves, the role of MFIs in providing essential financial services and driving inclusive growth remains pivotal for the people of Moldova.

In conclusion, this study underscores the critical role of the microfinance sector in the Republic of Moldova's economic growth and financial inclusion. The findings support the positive relationship between economic growth and credit demand while emphasizing the need for continued regulatory improvements. By addressing limitations and exploring future research directions, policymakers can strengthen the sector's contributions to sustainable economic development and financial well-being for all segments of society.

Conflicts of Interest. The author declares no conflict of interest.

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Citation: Paslari, A. Microfinance institutions in times of economic crisis. Case of Republic of Moldova. *Journal of Social Sciences*. 2023, 6 (3), pp. 55-67. [https://doi.org/10.52326/jss.utm.2023.6\(3\).04](https://doi.org/10.52326/jss.utm.2023.6(3).04).

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Submission of manuscripts:

jes@meridian.utm.md

[https://doi.org/10.52326/jss.utm.2023.6\(3\).05](https://doi.org/10.52326/jss.utm.2023.6(3).05)
UDC CZU 336.22:334.7



ASSESSMENT OF THE TAX BURDEN IMPACT ON THE ENTITY'S FINANCIAL RESULTS: MICRO AND MACROECONOMIC ASPECTS

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Received: 08. 23. 2023

Accepted: 09. 21. 2023

Abstract. Taxes are costs for entities that significantly affect the financial results of the economic-financial activity. The level of fiscal burden imposed on taxpayers depends both on the external fiscal environment in which the entity operates and on the characteristics of its financial and economic activities, including its cost structure, sales revenue, income and other indicators. Therefore, to ensure efficient activity, it is necessary to carry out a comprehensive analysis of the impact of fiscal burden on the entity's financial results. The purpose of this research is to assess the level of fiscal burden and determine the degree of influence on some indicators that characterize the economic-financial activity of the entity. The study is based on the methods of assessing the fiscal burden applied in international practice at both the micro and macroeconomic levels. The study reveals that in order to determine the fiscal burden, especially at the microeconomic level, there is a need to combine several indicators, in accordance with the conceptual approach to the analysis of the tax system. Therefore, increasing the entity's financial results does not only involve reducing taxes, but creating an efficient system for managing and optimizing the entire taxable system.

Keywords: *taxes, financial leverage, economic performance, gross domestic product, profit, rentability, fiscal system.*

Rezumat: Impozitele sunt pentru entităţi nişte costuri care afectează semnificativ rezultatele financiare ale activităţii economico-financiare. Nivelul presiunii fiscale impuse contribuabililor depinde atât de mediul fiscal extern în care îşi desfăşoară activitatea entitatea, cât şi de caracteristicile activităţilor sale financiare şi economice, inclusiv de structura costurilor sale, veniturile din vânzări, profitul şi alţi indicatori. Prin urmare, pentru a asigura o activitate eficientă, este necesar să se efectueze o analiză cuprinzătoare a impactului presiunii fiscale asupra rezultatelor financiare ale entităţii. Scopul prezentei cercetări este evaluarea nivelului presiunii fiscale şi determinarea gradului de influenţă asupra unor indicatori ce caracterizează activitatea economico-financiară a entităţii. Studiul se bazează pe metodele de evaluare a presiunii fiscale aplicate în practica internaţională atât la nivel micro, cât şi macroeconomic. Studiul relevă, că pentru a determina presiunea fiscală la nivel microeconomic este nevoie de a combina mai mulţi indicatori, în conformitate cu abordarea conceptuală a analizei sistemului fiscal. Prin urmare, sporirea rezultatelor

financiare ale entității nu implică doar reducerea impozitelor, dar și crearea unui sistem eficient de gestionare și optimizare a întregului sistem impozabil.

Cuvinte cheie: *impozite, pârghie financiară, performanță economică, produs intern brut, profit, rentabilitate, sistem fiscal.*

1. Introduction

Tax system is a central element in the functioning of the economy. Taxation fulfills the functions of stability and stimulation of financial policies with well-defined objectives in three areas: the stability of the economy, the allocation of production factors and the redistribution of income. Fiscal policy is the basic tool for the implementation of economic and social objectives by determining the types and size of taxes, but also by defining precise principles, determining their object, the tax base, the ways of calculating them, the rates and scales of taxation and the system of tax exemptions [1, pp. 30-31].

There are at least two approaches to the concept of tax system. According to the first approach, tax system represents the totality of taxes in a state [2]. The second approach distinguishes the entire tax system by its defining elements, being characterized through the prism of the relationships between the system's component elements [3, 4]. The first approach seems to be quite concise, allowing a simpler pragmatic analysis of how a tax system is constituted and works, we consider the second approach more expressive.

Tax system must be a strong incentive for capital accumulation and influence of the mechanisms of resource allocation on different markets [5, 6]. Hence there appears the need to develop a tax strategy that ensures the long-term needs and opportunities of the national economy. In the Republic of Moldova, the first public policy strategy that included a comprehensive framework related to public finances was developed in 2013 for a period of 9 years, later being extended with the Public Finance Management Development Strategy for the years 2023-2030, which aims to public finance policy towards macroeconomic stability [7].

Budgetary discipline requires governments to maintain fiscal policies that favor macroeconomic stability and sustainable growth. This will lead to the accumulation of taxes and fees that will enable governments to respond to unexpected medium-term shocks and anticipated long-term pressures, such as those involved in population ageing [8, p. 77].

Taxation affects economic agents in a particular way. The influence of taxation on economic activity is constant, each business-related operation increases the tax and the agent gets the cost that is transferred to him by the tax administration through tax collection. The fiscal regime influences the value of investments and consequently the entire value of the entity [9, p. 6].

Tax burden expresses the intensity with which taxes are collected [10] and characterizes the fiscal impact on the socio-economic development conditions of the entity (microeconomic level) and the national economy (macroeconomic level) [11].

Fiscal burden is of great economic importance because it indicates the extent to which the incomes of economic agents are adjusted through taxation and, at the same time, it shows the extent to which the budget procures its revenues through taxation. From a statistical point of view, tax burden represents an intensity indicator, which reflects the number of monetary units taken from the budget through taxation, which return to a monetary unit of income [12, p. 110].

Taxes and fees borne by entities are costs that significantly affect the financial results of their activity. Therefore, the desire of payers to reduce the tax burden in order to increase

the income is natural. The level of tax burden imposed on payers depends on several factors, among which we highlight the external fiscal environment in which the entity operates, as well as the specifics of its financial and economic activities, including the composition and structure of its costs, sales revenues, etc. [13, pp. 126-127]. Thus, in order to ensure the adoption of correct management decisions, it is necessary to carry out a detailed analysis of the impact of tax burden on the financial results of entities, which constitutes the fundamental purpose of the given work.

2. Materials and Methods

In this research, we estimated the relationships between tax burden indicators (i.e. fiscal burden ratio) and economic-financial results of entities that offer construction services, renovation and interior finishing works.

The variables considered for the empirical analyzes were the following:

Return on Sales – expresses the relationship that exists between the financial result and sales revenue; it reflects the effectiveness of the entity's marketing activity.

Return on Assets – shows the level of income obtained from the means invested in the entity's circuit, regardless of their financing source, in order to assess the quality and efficiency of the economic entity management.

Return on Capital – measures the efficiency of the equity capital use, i.e. the entity's ability to use equity capital in order to obtain profit.

The data used to calculate the macroeconomic indicators were taken from the website of the International Monetary Fund.

In order to highlight more objectively the consequences of tax burden on the economic-financial activity at the entity level, analyzed entities were grouped according to the tax burden ratio. Only the entities that were profitable during the years 2015-2020 were subjected to grouping. The entities were grouped according to the amplitude of the variation of the tax burden ratio into 3 groups.

3. Results and Discussions

The level of tax burden affects the financial position of each taxpayer. That's why, this indicator is very important for any entity, especially for the one with complex or newly created corporate structures. The calculation of the tax burden is necessary to develop alternative management decisions within investment projects, the efficient location of production, to develop short- and long-term business plans, as well as to analyze the results of the economic-financial activity of the entity. It is extremely important to calculate this indicator in case of a change in tax legislation to determine the possible financial consequences [14, p. 44].

The characteristic indicators of tax burden can be determined both at the macroeconomic and microeconomic levels. The literature in the field [1, 4, 5, 10,] recommends assessing the tension of the tax system at the macro level by calculating the ratio of the tax amount charged in the budget to the gross domestic product (GDP) and the tax burden at the micro level as "the ratio between the total mass of taxes and taxes paid by the entity to the tax authorities, with performance indicators". [2, 3].

In international practice, one opts for calculating the tax burden based on GDP, because this indicator ensures comparability between countries with different levels of economic development. The gross national product (GNP) can also be used as a basis for calculating the tax burden at the macro level, but it also includes the income obtained by

national economic agents abroad, which respectively pay taxes in the country in which they operate [15, p. 215].

A high degree of general tax burden causes various problems, such as a reduction in the production and investment activity of entities. In countries with such taxation, the state budget has large financial resources to cover public expenses, but taxpayers have lower incomes, which prevents business development, investment and saving. Under these conditions, the phenomenon of tax evasion appears, as well as that of "capital flight" to other countries with a lighter tax system. Raising taxes causes prices to rise, which leads to a decrease in demand for goods and services, and as a result dampens economic development. On the other hand, moderate taxation boosts production activity, investment, demand for goods and services and stimulates economic growth [16].

As for the Republic of Moldova, it has a lower tax burden compared to other countries in Central and South-Eastern Europe. Thus, in 2021, the respective indicator reached the level of 31.99%, placing our country in position 11 (in descending order). The lowest level of tax burden (27.04%) is registered in Albania. The maximum level of this indicator is reached by Greece, being 48.92% (Figure 1).

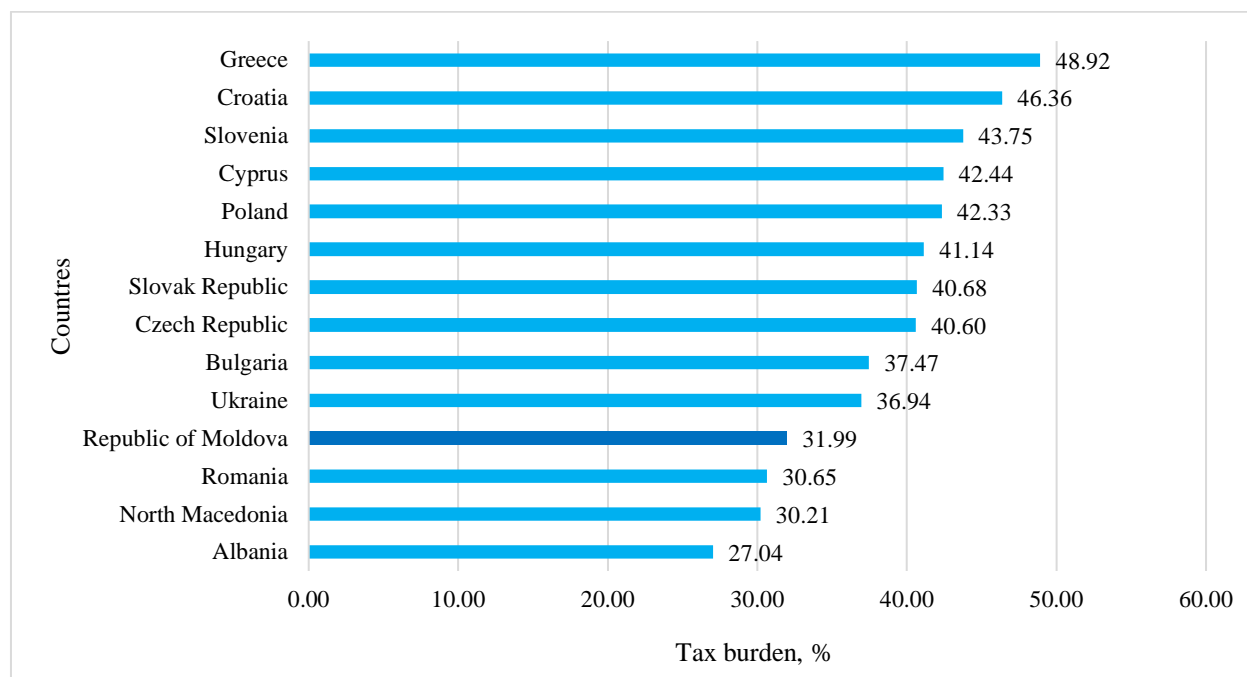


Figure 1. Tax burden at the macroeconomic level in the countries of the Central and South-Eastern European region, 2021 (%)

Source: developed by the author based on [17].

At the entity level, various methods or criteria for assessing the tax burden are proposed, which differ by [18, p. 232]:

- the types of taxes and fees included in the calculation of the tax burden;
- the status of taxes taken into account (paid or calculated);
- the integral indicator with which the amount of taxes is compared (revenues from sales, gross income, net income, profit of the management period before taxation, etc.).

According to the recommendations of the Organization for Economic Cooperation and Development (OECD), the tax burden at the entity level can be determined based on the following indicators [19, p. 16, 20]:

1) The effective marginal tax rate (EMTR) – expresses the extent to which taxation increases the cost of using capital and it is used if the entity obtains a minimum income to reach the profitability threshold, being calculated according to the following formula:

$$EMTR = \frac{\text{Cost of capital} - \text{Real interest rate}}{\text{Cost of capital}} \quad (1)$$

2) The effective average tax rate (EATR) – reflects the average tax contribution that an entity bears if it earns economic profits above zero. It is calculated as the difference between pre-tax and after-tax economic profit relative to pre-tax net income:

$$EATR = \frac{\text{Economic profit pre-tax} - \text{Economic profit post-tax}}{\text{Net income pre-tax}} \quad (2)$$

The calculation of these indicators is carried out separately for different types of assets and sources of financing, which is a disadvantage, because it does not provide complete information at the entity level.

The methodology proposed by the OECD provides for the determination of the tax burden based on net income. Another criterion for assessing the tax burden is based on the gross income [20, p. 37], which represents the sum of the income obtained by the entity from all sources within a certain fiscal period [21].

The tax rate (TBR) or the tension of the tax system per 1 leu of gross sales is determined according to the relationship:

$$TBR = \frac{\text{Total amount of paid taxes and fees}}{\text{Gross Income}} \quad (3)$$

Assessing the tax burden based on gross income allows for a multilateral and integrated examination of the tax burden, as well as the contribution of each type of tax in the creation and modification of the tax burden, Table 1.

Table 1

Dynamic analysis of tax burden at entity level*

Indicators	Amount, MDL
Gross Income	20,326,397
Taxes - total	2,976,243
<i>including:</i>	
Income Tax	64,256
Value Added Tax	2,898,358
Land Tax	4,406
Real Estate Tax	2,268
Other Taxes and Fees	6,955
The ratio of tax burden per 1 MDL of gross income	0.146
The ratio of income tax per 1 MDL of gross income	0.003
The ratio of value added tax per 1 MDL of gross income	0.143
The ratio of land tax per 1 MDL of gross income	0.0002
The ratio of real estate tax per 1 MDL of gross income	0.0001
The ratio of other taxes and fees per 1 MDL of gross income	0.0003

*The presented data are the average of the values in the analyzed entities.

The obtained results show that the tax rate of the analyzed entities is 14.6%, which in our opinion is quite favorable. The largest share in the total amount of taxes belongs to value added tax, and its tax rate is 14.3%. A smaller, but essential, share belongs to the income tax, the tax rate calculated on its basis being 0.3%. The other types of taxes have an insignificant weight in their total value.

Today, in Moldova there is no single methodology for calculating both the absolute and the relative size of the tax burden on economic agents, there is a lack of a clear picture of the significance of these indicators both at the macro and micro level.

The indicator that fully characterizes the influence of the tax system on the economic-financial activity of the entities is the fiscal burden ratio. The fiscal burden ratio expresses the degree of submission of the taxpayer to bear the fiscal burden established by law, that is, what percentage of the taxable income will be subtracted from his property and taken for the general needs of the society. An increase in the fiscal burden ratio indicates a relative decrease in disposable income, while a decrease in it signifies a larger income remaining at the entity's disposal [22, p. 135].

Of particular importance is the analysis of the dynamics of the fiscal burden ratio, as well as the way in which the two factors involved in defining the concept of fiscal burden – the size of the tax, on the one hand, and the size of the taxable matter, on the other hand, influence the variation of the fiscal burden ratio. Thus, when the fiscal burden ratio increases, while the taxable matter remains at a constant level, it means that there has been a change in the structure of the individual tax rates, which affects the economic activity, and vice versa, when there is a decrease or a maintenance of the fiscal burden ratio while the volume of taxable matter has increased, this situation is considered to be beneficial for the activity of economic units [23, p. 126].

The fiscal burden ratio is influenced by a number of factors specific to the tax system (number of taxes, tax rate, method of calculating taxable matter, type of taxation, etc.), as well as by other factors (gross domestic product, net sales, nature of political institutions etc.), Table 2.

Table 2

The influence of tax burden on changing financial results

Indicators	The groups of entities according to the fiscal burden ratio*		
	< 0.6	0.6-0.9	0.9>
Number of entities	15	23	25
The fiscal burden ratio in the environment per group	0.536	0.803	1.000
Net Sales, thousand MDL	1,802.67	1,956.87	3,286.36
Net Current Assets, thousand MDL	2,892.67	3,025.09	4,351.48
Gross Profit, thousand MDL	215.27	254.39	545.80
Return on Sales, %	13.6	15.7	19.9
Return on Assets, %	1.3	7.0	3.8
Return on Capital, %	2.1	14.7	16.1

*The analyzed entities were grouped according to the amplitude of the variation of the tax burden ratio.

The results of the calculations show us that the reduction of the tax burden influences the increase in sales volume, profit and profitability. In the first group, where the fiscal burden is 46.4%, the decrease in net sales and gross profit is respectively 154.2 and 39.12 thousand lei compared to the second group, where the tax burden is 19.7%.

The reduction of tax burden contributed to the increase in profitability indicators. Thus, in the second group, production profitability increased by 2.1 percentage points, economic profitability by 3.9 percentage points and the financial return by 12.6 percentage points.

In the entities from the third group, where the tax burden is equal to zero, the sales volume and gross profit increased by 1.68 and 1.12 times, respectively, compared to the second group. Production and financial profitability respectively increased by 4.2 percentage points and 1.4 percentage points. In this group, the reduction in economic profitability was conditioned by the increase in the permanent capital of the attracted sources. According to the calculations, their share was 76.1%. The attraction of borrowed sources caused the decrease of the profit of the management period before taxation by 10.4%.

Although it is not possible to establish unanimously accepted limits of the fiscal burden or to make calculations to establish its optimal level, the harmful influence on the development of the economy over time in the case of an irrational fiscal burden is known. Thus, tax evasion occurs by hiding real income by economic agents. It is only known that the greater the fiscal burden and taxes is, the greater is the desire to evade them [24, pp. 772-773].

The implementation of tax reduction policies can play a positive role in the financial performance of entities. At the same time, the implementation of the tax reduction policy significantly promotes the financial performance of both private and state entities [25, p. 9].

4. Conclusions

The main objective of fiscal policy is aimed at economic development and consolidation of economic growth. The effectiveness of the tax system is manifested through its consequences on economic activity. A fiscal system must stimulate the activity of economic agents and all the component parts of the country's national economy. The reduction of the fiscal burden can be considered as a successful compromise between the fiscal and incentive functions of this system.

The level of fiscal burden is difficult to fix between certain limits with precision, it being affected by certain random elements related to the diversity of levies, the nature of their insertion in prices, collection techniques, the level of economic development of the country, etc.

For a rigorous analysis of the fiscal burden, it is necessary to go beyond the numerical interpretation of the ratio between the taxes collected from taxpayers and the revenues obtained by them. It is important to assess the extent to which the entity's after-tax income meets subsistence and savings needs, that is, to consider the purchasing power of the after-tax income. The same level of fiscal burden may have different incidence on the economic activity of entities in different countries.

Thus, an optimal fiscal burden must ensure with financial resources the needs of the state, on the one hand, and on the other hand, it must ensure the stimulation of the economic development of the taxpayer for the activity of an entrepreneur. The fiscal burden indicator is an important criterion for evaluating the efficiency of the country's fiscal system.

Acknowledgments: This work was carried out within the institutional project "Development of modern analysis and financial forecasting tools in order to ensure informational support for the decision-making process" carried out in the period 2020-2023 within the Department of Accounting and Economic Informatics, Moldova State University.

Conflicts of Interest: The authors declare no conflict of interest.

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Citation: Zaharco, S. Assessment of the tax burden impact on the entity's financial results: micro and macroeconomic aspects. *Journal of Social Sciences*. 2023, 6 (3), pp. 68-76. [https://doi.org/10.52326/jss.utm.2023.6\(3\).05](https://doi.org/10.52326/jss.utm.2023.6(3).05).

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Submission of manuscripts:

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[https://doi.org/10.52326/jss.utm.2023.6\(3\).06](https://doi.org/10.52326/jss.utm.2023.6(3).06)
UDC [613.2+614.2]:621.798



FRONT-END NUTRITION LABELING AND ECO-LABELING MODELS FOR PUBLIC HEALTH PROMOTION

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Received: 07. 26. 2023

Accepted: 08. 28. 2023

Abstract. Creating food systems that provide healthy food for everyone without exploiting human or planetary resources, is one of the greatest challenges of this century. Front-end nutrition labeling and eco-efficiency systems have been proposed as a means of addressing health disparities and sustainable food and nutrition security. The aim of the study is the exploratory analysis of existing front-end nutrition labeling and eco-efficiency systems in order to make informed decisions about the further development of an effective labeling system. To carry out the study, the method of systematic document review and data triangulation was applied. The review provided information on the impact of color-coded labels and warnings in driving consumer purchasing behavior towards healthier products. Each labeling system had different attributes that should be taken into account when developing front-end nutrition labeling and eco-efficiency policies, depending on local contexts. However, front-end labeling is unlikely to be a panacea for changing consumer behavior but can target small incremental changes at different levels and actors in the food system.

Keywords: *food choices, nutritional quality, sustainable nutrition, food policies, food and nutritional security.*

Abstract. Crearea de sisteme alimentare care să ofere hrană sănătoasă fără a exploata resursele umane sau planetare este una dintre cele mai mari provocări ale acestui secol. Sistemele de etichetare nutrițională frontală și de eficiență ecologică au fost propuse ca mijloc de abordare a disparităților de sănătate și a securității alimentare și nutriționale durabile. Scopul studiului constă în analiza exploratorie a sistemelor existente de etichetare nutrițională frontală și de eficiență ecologică, pentru a lua decizii informate cu privire la dezvoltarea ulterioară a unui sistem eficient de etichetare. Pentru realizarea studiului a fost aplicată metoda de revizuire sistematică a documentelor și triangularea datelor. Revizuirea a furnizat informații cu privire la impactul etichetelor cu coduri de culoare și a avertismentelor în stimularea comportamentului de cumpărare al consumatorilor către produse mai sănătoase. Fiecare sistem de etichetare a avut atribute diferite, care ar trebui luate în considerare la elaborarea politicilor de etichetare nutrițională frontală și eficiență ecologică,

în funcție de contextele locale. Cu toate acestea, este puțin probabil ca etichetările frontale să fie un panaceu pentru schimbarea comportamentului consumatorilor, dar pot viza mici schimbări incrementale la diferite niveluri și actori din sistemul alimentar.

Cuvinte cheie: *alegeri alimentare, calitate nutrițională, nutriție durabilă, politici alimentare, securitatea alimentară și nutrițională.*

1. Introducere

Ca prioritate în ascendență, dar și ca componentă de bază a paradigmei dezvoltării globale, securitatea alimentară este esențială pentru consolidarea capacităților umane. Insecuritatea alimentară este asociată cu un risc crescut de boli cronice și cu malnutriție [1]. În eforturile sale de a pune capăt insecurității alimentare și malnutriției sub toate formele ei, umanitatea, indubitabil se îndepărtează constant de țintele Obiectivului de Dezvoltare Durabilă 2 (ODD2 – Zero Foame). Efectele persistente ale pandemiei COVID-19, intensificarea conflictelor geopolitice, extremele climatice, modelele inegale de redresare economică, continuă să împiedice progresul și să creeze eșecuri, care, de asemenea, fac vulnerabile eforturile de eradicare a insecurității alimentare [2]. Un număr tot mai mare de studii au arătat că majoritatea bolilor cronice sunt cauzate de deficiențe de nutrimente, ca urmare a modelelor alimentare dezechilibrate [3]. Politicile, stimulentele și campaniile de abordare a sănătății publice prin identificarea oportunităților simultane de mesaje privind nutriția și alimentația sănătoasă ar constitui o modalitate de eradicare a insecurității alimentare.

Una dintre direcțiile importante în acest domeniu este dezvoltarea nutriției durabile, ceea ce, presupune satisfacerea necesităților nutriționale ale fiecărui individ, dar cu grijă față de mediu. Sistemele alimentare globale actuale nu sunt în conformitate cu această definiție și nu pot fi considerate durabile, deoarece nu asigură securitatea alimentară și au numeroase efecte negative asupra mediului [4]. Crearea de sisteme alimentare care să ofere hrană sănătoasă tuturor, în prezent, dar și pentru generațiile viitoare, fără a exploata resursele umane sau planetare este una dintre cele mai mari provocări ale acestui secol.

În mod similar, Comisia Europeană (EC) a cerut în mod explicit ca sistemul de informare nutrițională să facă parte din „strategia europeană privind problemele legate de nutriție, excesul de greutate și obezitate” pentru a „facilita înțelegerea de către consumatori a contribuției sau importanței alimentelor la conținutul de energie și nutrimente al unei diete”, permițând astfel consumatorilor să opereze alegeri alimentare mai sănătoase, conform cerințelor EC (Regulamentul 1169/2011) [4, 5]. Reglementările alimentare ar putea fi înțelese ca un set de acțiuni, conduse de stat, pentru protejarea consumatorilor. Ca acțiuni de reglementare ar putea fi enumerate și impozitarea, restricția/interdicția de comercializare și etichetare a alimentelor, inclusiv etichetarea nutrițională frontală [6]. Existența politicilor de etichetare nutrițională în multe țări vorbește despre fezabilitatea unor astfel de politici, cu variabilitate a dovezilor privind acceptabilitatea, care depindea de tipul de etichetare nutrițională propusă [7, 8]. Prin urmare, etichetarea alimentelor este unul dintre cele mai importante mijloace de comunicare a informațiilor relevante consumatorilor despre identitatea și conținutul produsului, precum și de conducere a deciziilor de cumpărare ale clienților [9, 10]. Multe sisteme de etichete nutriționale frontale (ENF) a produselor alimentare sunt propuse ca mijloc de abordare a disparităților de sănătate și a securității alimentare și nutriționale durabile [11]. Aceasta implică adoptarea de noi modele [12], care să încurajeze sistemele agroalimentare să acorde mai multă atenție calității nutriționale a alimentelor [13–15], astfel ca acestea să fie sigure, accesibile pentru toți, în mod durabil și

inclusiv și, totodată, aplicabile, obiective și transparente și ar putea să reducă o serie dintre obiectivele concurente securității alimentare [16–18].

Studiul a avut ca scop realizarea unei analize exploratorii a sistemelor existente de ENF și EE, pentru a lua decizii informate cu privire la dezvoltarea ulterioară a unui sistem eficient de etichetare frontală. ENF ar constitui un instrument de sprijinire a strategiilor de prevenire a obezității și altor boli netransmisibile asociate alimentației.

2. Materiale și Metode

Pentru realizarea studiului a fost aplicată metoda de revizuire sistematică a documentelor. Revizuirea literaturii cu privire la ENF și de EE a inclus perioada 2010 - 2023, utilizând motoarele de căutare PubMed și Web of Science și, în mare parte, pagina oficială a Comisiei Europene. Căutarea a inclus 606 articole și review-uri cu text integral, acte normative și meta-analize. Au fost validate 37 lucrări cu text integral, relevante cercetării date și în acces deschis. Cuvintele-cheie folosite pentru căutare au fost: *etichetare frontală, calitate nutrițională, indicatori de eficiență ecologică, durabilitate, sisteme agroalimentare durabilă*. Pentru a obține și a oferi confluente de dovezi și pentru a genera credibilitate s-a practicat *triangularea datelor* [19, 20].

3. Rezultate și discuții

Etichetarea nutrițională este considerată unul dintre cele mai importante mijloace de comunicare a informațiilor relevante consumatorilor despre identitatea și conținutul produsului, precum și de conducere a deciziilor de cumpărare ale clienților. Multe țări au adoptat politici de etichetare nutrițională, ceea ce spune despre fezabilitatea acestora, cu dovezi variabile privind acceptabilitatea, în dependență de tipul de etichetare nutrițională propusă [7, 8]. Interesul autorităților publice pentru ENF este justificat de povara bolilor atribuite riscurilor alimentare, de creșterea incidenței supraponderabilității și obezității în majoritatea statelor membre UE [11]. În Europa, furnizarea de informații alimentare către consumatori este reglementată în mare parte de Regulamentul (UE) nr. 1129/2011 al Comisiei Europene, care stabilește informațiile obligatorii despre alimente. Tot odată, a fost permisă dezvoltarea propriilor scheme naționale voluntare, adaptate consumatorilor țării date și care să respecte anumite criterii, precum și reprezentarea acestor elemente prin alte formate (de exemplu, forme grafice). Multiplele sisteme de etichetare frontală propuse și implementate în anumite țări, ar putea fi clasificate în:

- *specifice nutrimentelor*, care oferă informații nutriționale despre nutrimente;
- *scheme indicatoare rezumative*, care oferă o apreciere sintetică a calității nutriționale generale produsului.

Categoria „*etichetare specifică a nutrimentelor*” poate fi subdivizată în subcategorii „*numerice*” și „*codificate după culori*”. Schemele de „*indicatori rezumativi*” pot fi subdivizate în indicatori „*pozitivi*” (logo-uri de aprobare), care pot fi aplicați numai alimentelor ce îndeplinesc anumite criterii nutriționale și indicatori „*gradați*”, care oferă informații globale și clasificate cu privire la calitatea nutrițională a alimentelor și pot fi aplicați pe toate produsele alimentare [11, 21] (Figura 1).

Cu toate acestea, unele etichete pot crea percepții false cu privire la calitatea produselor și pot deruta sau induce în eroare consumatorii [8]. Încrederea și transparența în orice schemă de etichetare sunt esențiale pentru ca aceasta să fie semnificativă și să motiveze schimbarea în indivizi sau industrii [22].

Rezultatele unui studiu, realizat pe 1064 adulți italieni, a avut ca scop de a compara performanța și preferințele consumatorilor, precum și intenția de cumpărare, înțelegerea subiectivă și percepția a două sisteme de etichetare frontală propuse sau implementate în prezent în țările UE, formatul interpretativ *Nutri-Score* și formatul non-interpretativ *NutrInform Battery*. În ceea ce privește capacitatea participanților de a identifica produsele cele mai favorabile din punct de vedere nutrițional, *Nutri-Score* a depășit *NutrInform* în toate categoriile de alimente, cea mai mare cotă fiind observată pentru grăsimile adăugate. În general, cu *Nutri-Score*, participanții italieni au avut mai multe șanse să intenționeze să cumpere produse favorabile nutrițional decât cu *NutrInform*. Concentrându-se pe uleiul de măsline, participanții din grupul *Nutri-Score* au avut o intenție mai mare de cumpărare a uleiului de măsline în comparație cu cei din grupul *NutrInform* după manipularea etichetei. Formatul interpretativ *Nutri-Score* pare a fi un instrument mai eficient decât *NutrInform* pentru orientarea consumatorilor italieni către alegeri alimentare mai favorabile din punct de vedere nutrițional [23].

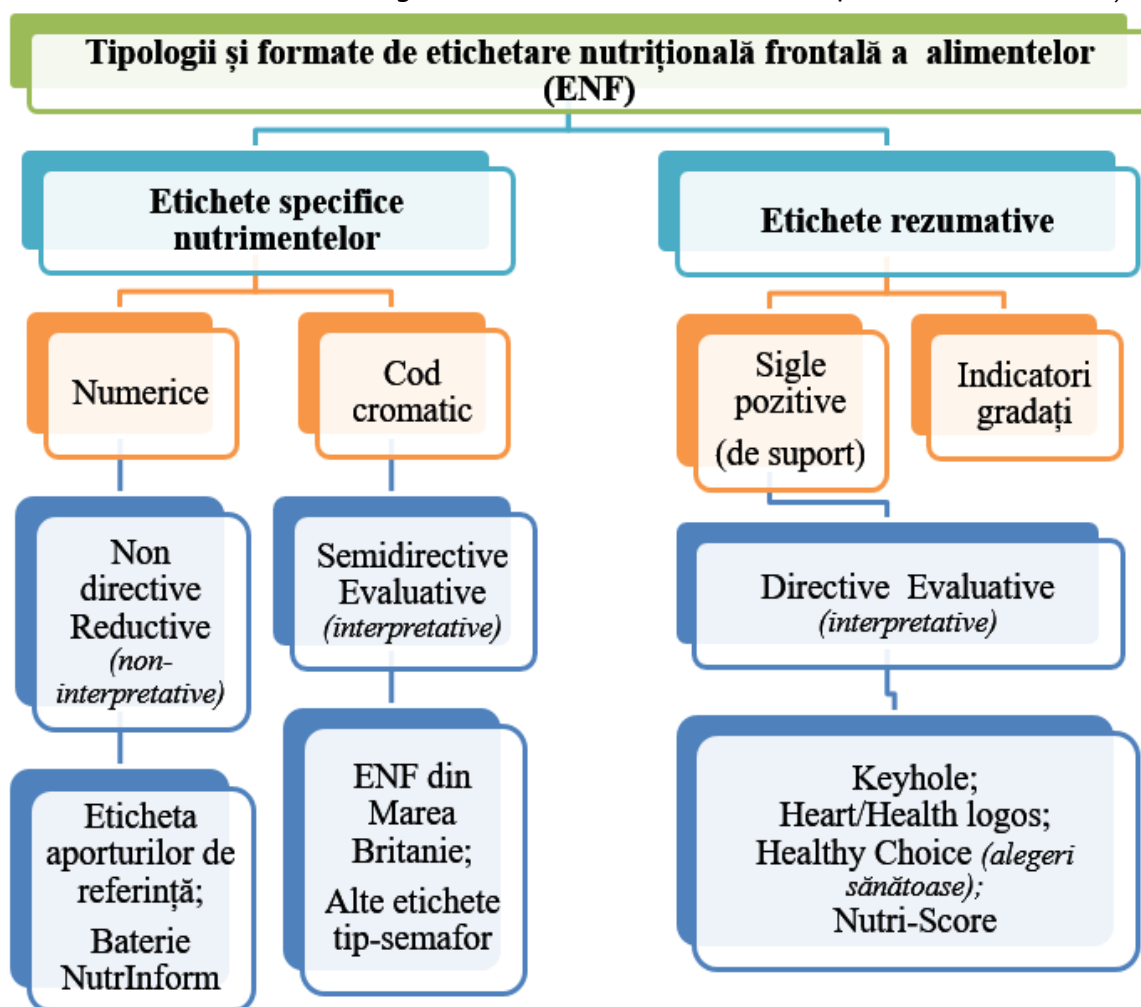


Figura 1. Tipologii și formate de etichetare nutrițională frontală implementate/propuse de statele membre ale Uniunii Europene și Regatul Unit
Dezvoltată de autori după: [21].

Conform altor studii, etichetele de avertizare funcționează mai bine decât modelele cromatice, cum ar fi etichetele tip-semafor și *Nutri-Score* (Figuri 2-5) pentru a descuraja achiziționarea de produse nesănătoase și pentru a reduce cantitatea de calorii și grăsimi saturate achiziționate și în lipsa etichetelor, etichetele de avertizare au redus conținutul de

calorii și zahăr al produselor achiziționate, în timp ce alte sisteme nu au avut niciun efect asupra achizițiilor [24].

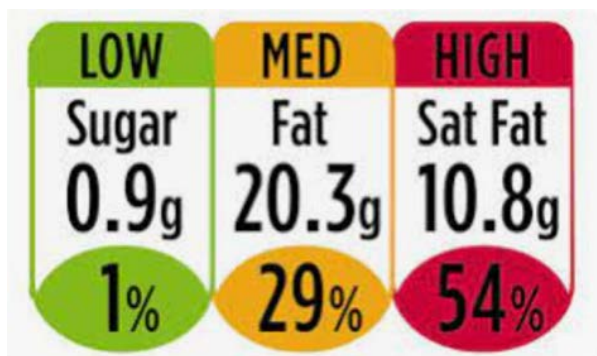


Figura 2. Etichetare frontală tip Semafor.



Figura 3. Etichetare frontală Nutri-Score.

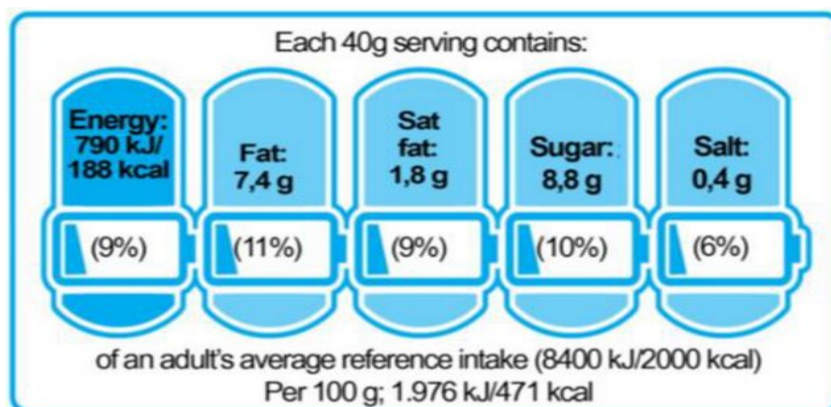


Figura 4. Etichetare frontală NutriInform Battery.



Figura 5. Sistemul de avertizare cu octogon negru.

Surse: [6, 11, 24].

Ținând cont de ambalajele atrăgătoare care subliniază calitatea pretinselor produse, sunt necesare simboluri contrastante pentru nutrimente inadecvate. Federația Mondială a Inimii menționează că, pentru a fi implementate cu succes, sistemele de ENF trebuie să țină cont de alfabetizarea consumatorilor și de normele culturale predominante în ceea ce privește alimentația și nutriția [25–28].

Nutriția durabilă. Una dintre direcțiile importante de asigurare a unor sisteme agroalimentare durabile și, respectiv a securității alimentare este dezvoltarea nutriției durabile [4, 14]. Îmbunătățirea eficienței ecologice a sistemelor alimentare este una dintre

provocările globale majore cu care se confruntă lumea modernă [29]. Etichetarea durabilă a produselor alimentare este asociată, cel mai frecvent, cu schemele de certificare socială și ecologică. Mai recent, a apărut un număr tot mai mare de etichete care estimează efectul unui produs pe unul sau mai mulți factori de mediu, cum ar fi amprenta de carbon - ca marker al emisiilor de gaze cu efect de seră sau al schimbărilor climatice. Se pare că există o cerere pentru această varietate de etichete de durabilitate, totuși, nu este sigur dacă aceste etichete vor afecta selecțiile și achizițiile zilnice ale oamenilor [30, 31]. Această asociere a sănătății cu produsele ecologice este, probabil, mai mult asociată cu valorile acordate practicilor de producție ecologică decât cu alimentele în sine, deoarece, până în prezent, dovezile care să confirme calitatea nutrițională superioară a produselor ecologice sunt limitate.

Eficiența ecologică (EE). Consiliul Mondial al Afacerilor pentru Dezvoltare Durabilă a descris EE ca o modalitate de furnizare de bunuri la prețuri competitive care satisfac cerințele ființelor umane și conduc la o calitate mai bună a vieții acestora, reducând în același timp impactul asupra mediului [32, 33]. Ceea ce ar însemna de a obține mai mult cu mai puțin; dublarea productivității resurselor și înjumătățirea utilizării resurselor, cu accent pe reducerea deșeurilor, minimizarea emisiilor, atenuarea impactului asupra mediului și extinderea beneficiilor economice [32, 34]. Etichetarea produselor cu indicatori de EE promovează selecția unor alegeri alimentare mai durabile [35, 36], sporesc interesul consumatorilor [32] și este deja folosită în multe țări, iar dovezile din recenzii sistematice sugerează eficiența acestora [30, 31] (Figura 6).

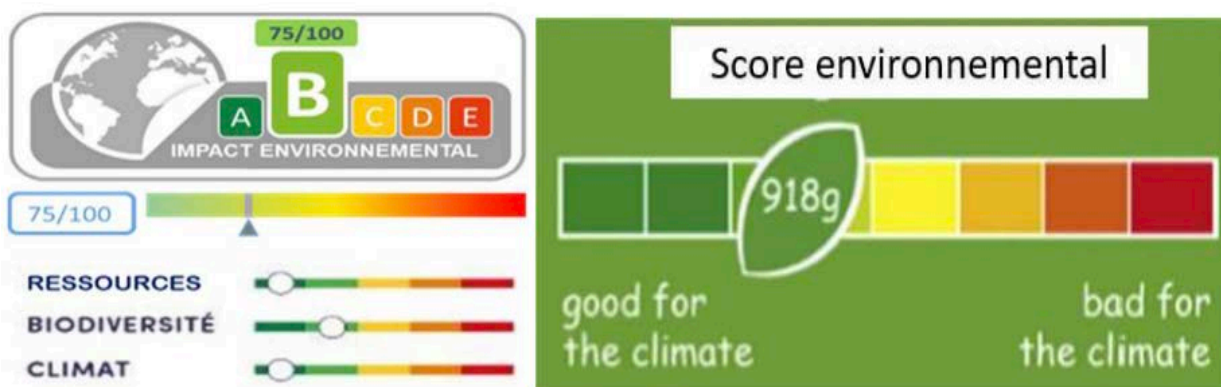


Figura 6. Exemple de formate pentru o eco-schemă oficială de afișare.

Sursa: [40].

Scorul ecologic (SE) este un exemplu de etichetare durabilă, constituind un efort comun al profesioniștilor din domeniile de calcul, distribuție și alimentație, pentru a crea un instrument simplu, care să poată fi folosit de toți jucătorii sistemului agro-alimentar, inclusiv consumatorii, pentru a reduce impactul producției de alimente pe planetă. În termeni matematici SE se calculează:

$$SE = (\text{Evaluarea ciclului de viață} - ECV) + \text{Criterii de calitate adiționali} / 100 \quad (1)$$

ECV ia în considerare impactul asupra mediului prin producție, transport, fabricație și ambalare, acordând un scor de la zero la o sută. Datele neincluse în ECV, dar care iau în considerare impactul pozitiv sau negativ asupra mediului sunt preluate de pe eticheta produsului. Tot de la producător pot fi preluate și informațiile cu privire la criteriile suplimentare de calitate: reciclarea ambalajelor, etichete (Bio, calitate etc.), de proveniența ingredientelor, sezonabilitatea alimentelor folosite (pentru rețete și produse alimentare gata

de consum). Toate aceste date pot aduce plus valoare (bonus) sau pot depuncta produsul, influențând scorul. Scorul total de 100 atribuie litere-calificative de la A la E (Figura 7).

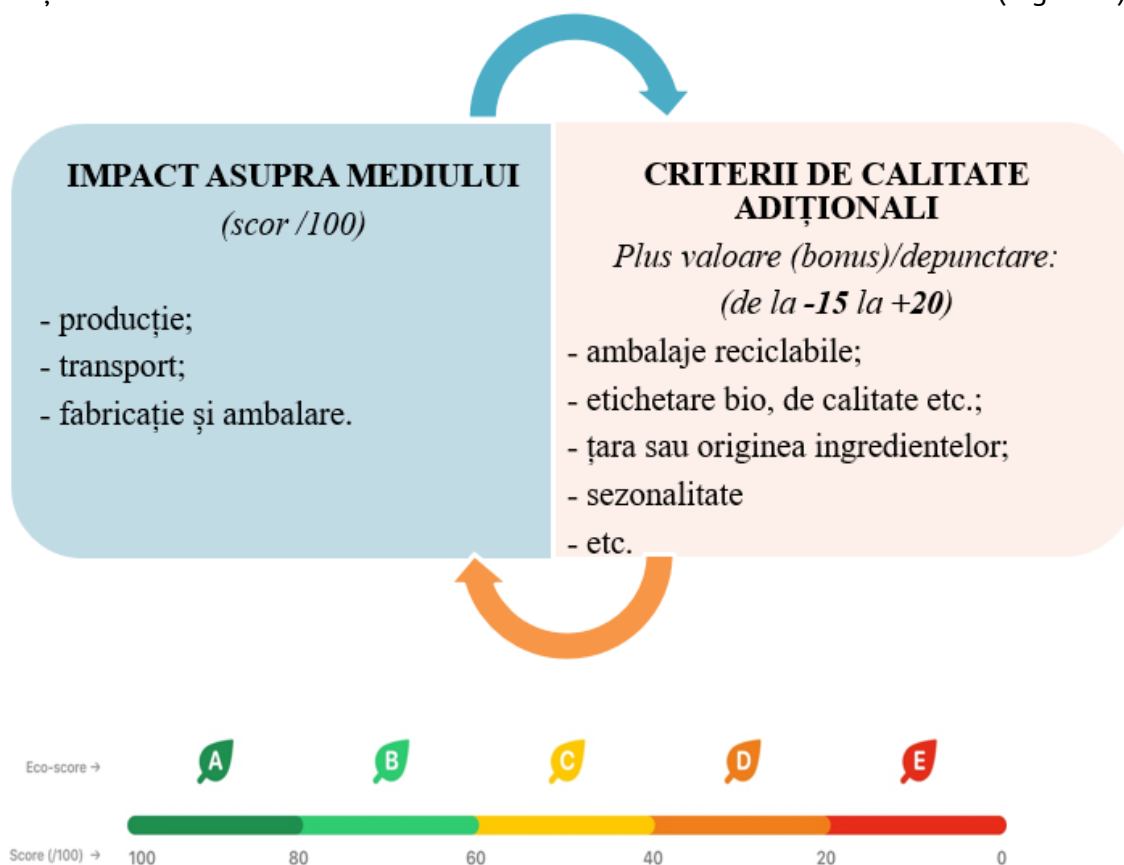


Figura 7. Scorul ecologic și componentele sale.

Sursa: [41].

Deși dovezile sugerează că alimentele mai sănătoase tind să fie mai durabile, impactul unui produs asupra sănătății și asupra mediului nu se suprapune întotdeauna: unele alimentele mai sănătoase (pește, unele nuci) pot prezenta un impact negativ mai mare asupra mediului, în comparație cu alimentele mai puțin sănătoase (băuturile îndulcite cu zahăr) [37, 38]. În acest mod, etichetele ecologice, uneori, pot conduce la alegeri alimentare greșite, încurajând alegeri de produse cu impact mai mic asupra mediului [39]. În același timp, utilizarea simultană a etichetelor nutriționale frontale și de eficiență ecologică, din cauza cantității crescute de informații sau dacă informațiile sunt percepute ca fiind contradictorii (de exemplu, dacă un produs este durabil, dar nesănătos), pot crea confuzii, fără a aduce beneficii [31].

5. Concluzii

Tranziția către diete durabile și sănătoase este esențială pentru îndeplinirea Obiectivelor de Dezvoltare Durabilă. Revizuirea a furnizat informații cuprinzătoare cu privire la impactul etichetelor cu coduri de culori și a avertismentelor în stimularea comportamentului de cumpărare al consumatorilor către produse mai sănătoase. Fiecare tip de etichetă a avut caracteristici diferite, care ar trebui luate în considerare la elaborarea politicilor de etichetare nutrițională frontală și eficiență ecologică, în funcție de contextele locale. Studiul a scos în evidență rolul politicilor de etichetare frontală în direcționarea alegerii consumatorilor și încurajarea industriei alimentare să-și reformuleze produsele.

Deși etichetarea nutrițională frontală și indicatorii de eco-eficiență adaugă dovezi cu privire la fezabilitatea și eficacitatea acestora ca o măsură importantă pentru a schimba comportamentul alimentar, pentru a îmbunătăți sănătatea planetei, experiențele oferă, în același timp, diverse motive pentru a fi precauți cu privire la creșterea etichetării de durabilitate. În primul rând, etichetarea frontală și de durabilitate este puțin probabil să fie un panaceu pentru schimbarea comportamentului consumatorilor. În schimb, poate viza mici schimbări incrementale la diferite niveluri și actori din sistemul alimentar, atât la nivel individual, cât și al organizațiilor.

Se impun cercetări cu privire la sistemele de etichetare nutrițională și de eficiență ecologică frontală pentru a oferi oportunități de dezvoltare de analize ale sistemului alimentar și metrice de sustenabilitate, iar, ca urmare, actorii din cadrul sistemului alimentar vor fi mai bine echipați pentru a comunica nuanțele și a evalua riscurile și compromisurile intervențiilor la nivelul întregului sistem și, în cele din urmă, vor contribui la evoluția sistemelor alimentare durabile și sănătoase.

Acknowledgments: Supported by the National Agency for Research and Development (NARD), Republic of Moldova: Project on issues of urgent interest: *Exploratory analysis of food security in the Republic of Moldova based on metrics of nutritional and sustainable quality (CNuD) of food products*. Project No. 21.00208.5107.06: *PD Contributions regarding nutritional eradication of gluten consumption diseases*, and Project No. 20.80009.5107.10: *PS Personalized nutrition and intelligent technologies for my well-being*, which runs within the Technical University of Moldova.

Conflicts of Interest: The authors declare no conflict of interest.

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Citation: Siminiuc, R.; Turcanu, D. Front-end nutrition labeling and eco-labeling models for public health promotion. *Journal of Social Sciences*. 2023, 6 (3), pp. 77-86. [https://doi.org/10.52326/jss.utm.2023.6\(3\).06](https://doi.org/10.52326/jss.utm.2023.6(3).06).

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Submission of manuscripts:

jes@meridian.utm.md

[https://doi.org/10.52326/jss.utm.2023.6\(3\).07](https://doi.org/10.52326/jss.utm.2023.6(3).07)
UDC 371.1/.2(680)



RELATIONSHIP BETWEEN TRAINING EFFECTIVENESS AND EDUCATOR PERFORMANCE IN THE EASTERN CAPE DEPARTMENT OF EDUCATION, SOUTH AFRICA

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Received: 08. 17. 2023

Accepted: 09. 23. 2023

Abstract. Human Resource Development integrates and aligns training and development with organisational goals and strategy to improve performance. However, ingrained suboptimal skills and training opportunities in the Eastern Cape Department of Education (ECDoE) negatively impacts learning achievement outcomes. The purpose and objective of the study is to establish the relationship between training effectiveness and educator performance in the ECDoE. The study adopts a quantitative research strategy with 270 respondents. A survey questionnaire was used to collect data from participants. The survey questionnaire's internal consistency and reliability were measured using Pearson's coefficient and Cronbach's alpha, respectively. Results show that most respondents did not view the trainings provided by the ECDoE as relevant to job performance, and the attainment of the Department's strategic goals. The study concludes that ECDoE's training should be closely aligned with educators' Key Performance Areas, Performance Development Plans and individual needs analysis.

Keywords: *Continuing Professional Teacher Development; learner performance, skills development, strategic plan.*

Rezumat. Dezvoltarea resurselor umane integrează și aliniază formarea și dezvoltarea cu obiectivele și strategia organizației pentru a îmbunătăți performanța. Cu toate acestea, abilitățile și oportunitățile de formare suboptimale, înrădăcinate în Departamentul de Educație din Eastern Cape (ECDoE), au un impact negativ asupra rezultatelor învățării. Scopul și obiectivul studiului au constat în stabilirea relației dintre eficacitatea formării și performanța educatorului în ECDoE. Studiul a adoptat o strategie de cercetare cantitativă cu 270 de respondenți. Un chestionar de sondaj a fost folosit pentru a colecta date de la participanți. Consistența internă și fiabilitatea chestionarului sondajului au fost măsurate folosind coeficientul Pearson și, respectiv, indicele alfa Cronbach. Rezultatele au arătat, că majoritatea respondenților nu consideră instruirile oferite de ECDoE ca fiind relevante pentru performanța postului și pentru atingerea obiectivelor strategice ale Departamentului. Studiul concluzionează, că formarea ECDoE ar trebui să fie strâns aliniată cu domeniile cheie de

performanță ale educatorilor, planurile de dezvoltare ale performanței și analiza opțiunilor individuale.

Cuvinte cheie: *Dezvoltarea profesională continuă a profesorilor; performanța cursanților, dezvoltarea abilităților, plan strategic.*

1. Introduction

In 1994, the new democratic South African government abolished the nineteen education departments that were racially biased and completely overhauled the education system. The South African school curriculum has since then undergone several changes aimed at creating new and improved policies to address shortcomings of the apartheid education system [1] and achieve Sustainable Development Goal (SDG) 4. Training and development are human capital capacity building main priorities of the new government, as it sought to improve teacher and learner performance [2]. Sustainable Development Goal (SDG) 4, aims to ensure inclusive and equitable quality education and promote lifelong learning opportunities for all. It views education as an equity-oriented lifelong process [3]. Specifically, Sustainable Development Goal, Target 4 recognises educators as critically important cogs for guaranteeing quality education. However, as noted by [4] many South African schools' pedagogical practices still grapple with legacies of apartheid, which persistently linger in the education system, to the detriment of optimum learner achievement.

Policy initiatives such as teacher appraisal, Whole-School Evaluation policy, Integrated Quality Management System (IQMS) and Quality Teaching and Learning Campaign (QLTC), and the Curriculum and Assessment Policy Statement (CAPS) introduced in 2012, have mostly not yielded the desired effects [5]. For example, in mathematics, South African learners lag behind their peers in international benchmarking [3,5]. Educators have been criticised for lack of content knowledge, and poor overall professionalism [6]. Similarly, [5] note that the South African, education system is plagued by unsatisfactory achievement of students' academic performance, as evidenced by poor national and international comparative assessments results. Thus, for [7] enhancing teacher pedagogical and subject matter expertise should be the focus of good professional teacher development. For [8] pedagogy is defined as "the observable act of teaching together with its attendant discourse of educational theories, values, evidence, and justifications". The framework for action for SDG 4, implementation provides that "educators should be empowered, motivated, professionally qualified, and supported within well-resourced, efficient and effective governing systems" [9].

Notwithstanding, Sustainable Development Goal (SDG) 4, remains elusive, as many schools are not only ill equipped to provide quality education, but educators also lack continuous professional development to give expression to the ideals of SDG 4 [9]. A 2021 survey undertaken in the ECDoE, shows that seventy percent of the educators did not receive in-service training on Mathematics and Science subjects and that only fifteen percent of the educators received training on English literacy [10]. In the Eastern Cape province, the matric pass rate has over the years consistently been the lowest with lower marks scored in mathematics and science subjects [11]. In terms of student achievement in the Matriculation pass rate performance in 2018, the Department was the worst performer with a figure of only 65% [6]. However, the 2022 academic year Eastern Cape Matric pass rate results released in January 2023, were an exception with the province ranked six out of the nine South African provinces at 77.3%. Lack of capacity and skills, impedes educator and learner performance. To improve learner performance, it is necessary that educator competencies are continuously

improved, to reinforce educator content knowledge, pedagogical competencies and skills [10,12,13]. Of concern is however that, despite efforts to improve teacher performance and school effectiveness in the ECDoE, only a few educators were afforded human capital development opportunities [10,14,15]. The purpose of this paper is thus to:

- Determine how training aligns with educator performance in the ECDoE in South Africa
- Establish the relationship between training effectiveness and educator performance in the ECDoE, South Africa.
- Recommend how the ECDoE can improve training programmes to improve educator performance for the achievement of goals of the strategic plan.

2. Literature Review - Overview of skills shortages South Africa's education sector

Available extant literature generally indicates lack of adequate and requisite training and human capital skills development among educators, which negatively affect educator performance [3,5,6,10,16]. In the South African context, many educators appear to have limited knowledge and experience in using assessment effectively for improving teaching and learning [15,17]. The skills and experience dearth among South African educators, emanate from training and development shortcomings and lack of resources for implementing training programmes [18]. For example, a survey undertaken in the Northern Cape province in South Africa, suggests that seventy-eight percent (78%) of educators surveyed, did not understand what it took to be a successful educator and what should be done to improve school effectiveness and performance. The report further revealed that about fifty percent (50%) of educators lacked capacity to deliver effective lessons to learners, which often resulted in under-performance of learners in schools [18]. In the KwaZulu Natal province, a survey conducted by [19] similarly indicated that in the education sector more than sixty-five percent (65%) of the employees were lowly skilled and only eight (8%) were highly and adequately skilled. The report further indicated that twenty percent (20%) of the employees were general workers who did not have requisite qualifications. Similarly, skills and training opportunities were lacking in the provinces of Limpopo and the Western Cape, where only a few educators had undergone professional development training. Therefore, despite the vital importance of linking training to the strategic plan at the provincial department of education, district, and school levels, commitment levels and investment in teacher professional development are still low [20].

As in other South African provinces, little attention has also been paid to improving human capital in the education sector, in the Eastern Cape Department of Education. As such, there have been persistent outcries and lamentations regarding lack of skills, capacity and knowledge required to achieve goals and key policy imperatives of the Strategic Plan 2020-2025. However, [1] indicates that educators with inadequate essential and requisite skill capabilities are the main reason for the poor academic performance in schools. The ECDoE has been providing training programmes including the Primary School Reading Intervention Programme (PSRIP) and curriculum development. These programmes are however limited in their ability to accommodate teachers and they still fall far short of addressing the ECDoE's capacity and competence gaps. As indicated in the [21] only 94 teachers from eight (8) districts received PSRIP training, with a focus on routines/time allocation, basic methodology, and early grade reading assessment. A survey conducted by [22] found out that in the ECDoE, more than fifty-five percent (55%) of educators lacked e-learning expertise.

To achieve its goals as outlined in the strategic plan, the ECDoE must therefore increase the technological proficiency of its educators. [23]. Without the requisite skills, the province finds it difficult to prioritise the Medium-Term Strategic Framework (MTSF), which lays the groundwork for growth and development, as well as high-quality basic education [10,24]. In South Africa, the National Development Plan (NDP) (Vision 2030) places a strong priority on ensuring that everyone has access to high-quality education and training that leads to noticeably better learning outcomes. Thus, crucial priorities unique to the province of the Eastern Cape create the Provincial Development Plan (PDP), which is based on the NDP. As such, the 2019-2023 Education System Transformation Plan (ESTP) specifically targets the PDP goals and three key issues: institutional capabilities, economic opportunity, and human development [25]. Similarly, Action Plan to 2024, towards the realisation of schooling 2030, seeks to improve professionalism, teaching skills, subject knowledge and computer literacy of teachers throughout their entire careers [26]. To close the skills gap, it is prudent that the Eastern Cape Department of Education redouble its efforts in human capital development, aligning such skills development to its strategic plan. This in essence require human capital development to be aligned with the departmental strategic goals. Within the context of building a capable, developmental state, the South African public sector performance is underpinned by priorities of the Medium-Term Strategic Framework (MTSF). Facilitating this vision into action, as envisioned by the National Development Plan (Vision 2030), require a more functional and integrated government, with capacitated, professional, responsive and meritocratic public servants, with requisite skills and competencies to strengthen public service efficiency [27].

2.1 Concept of Training and Development

Training and development are a strategic move for improving employee competencies for current and future work demands. Training is “an intervention employed to bridge employees’ skill gap between current performance and what is expected” [16]. As indicated by [28] training and development, job analysis and design affect organisational performance. Hence, training and development help human capital enhance skills and substantially impact on employee performance and productivity [16]. Training can be described as a set of intentional interventions meant to enhance workers’ knowledge, skills, and attitudes so they can do their jobs successfully [29]. Training is described by [22] as a short-term, planned strategy for modifying one’s competencies, attitudes, and beliefs as well as one’s knowledge, skills, or behavior through learning and skill-building programs. Training refers to the process of acquiring skills and knowledge to enhance employee performance at work. In a similar vein, [29] believe that the purpose of training is to master the knowledge, skills, and behaviors that are stressed in training programmes and apply them to daily activities. Training programmes give employees the necessary information and skills to do their jobs. According to [1] organisations must support employee training to enhance their capacities or expertise for sourcing human resources. The ECDoE can accomplish its organisational goals stated in the strategic plan, mission, and vision by putting training and human capital development programmes into practice. Consequently, it is necessary that the ECDoE conduct a skills and abilities audit/evaluation based on an analysis of the goals of the strategic plan.

Since they must be in line with the Key Performance Areas (KPA) of the educators, overall school improvement, and school effectiveness objectives, the human capital skills

development and training programmes should be developed in accordance with the ECDoE's strategic plan and performance management system. This makes it possible to fulfil the ECDoE's mission, vision, and goals. The main causes of the deficient skills profile are the low relevance of much publicly funded training and the low investment by organisations in training [16]. Due to the detrimental impact this bad profile has on employee performance, educators' pedagogical abilities must be improved. New skills, capacities, and knowledge are indispensable drivers of educator performance. To achieve institutional goals and gauge staff performance using the Key Performance Areas and Key Performance Indicators envisioned in the Strategic Plan, human capital development through continuing professional development training programmes becomes essential.

2.2 Concept of Employee Performance

Employee performance, according to [19] is defined as how well employees carry out their responsibilities and complete their assigned tasks. The effectiveness of an employee's performance is evaluated based on a set of standards, and this data is then shared with the individual. Based on a set of standards, the effectiveness of an employee's performance is assessed, and the results are then communicated to the person. Employee performance is frequently evaluated in terms of quality, quantity, time, cost, and accomplishment over a defined period [13]. Individual employee performance affects organizational performance, which in turn influences how valuable an employee is to the company. Employees need to comprehend an organization's mission, vision, and goals as well as how their work fits into the organization and how they contribute to that organization's goals, mission, and vision [30]. Effective performance management is essential to an organisation, it helps organisations align its employees, resources, and systems to meet strategic goals.

A good performance management system helps employees understand the goals of an organisation and what they are expected to do to achieve such goals [31]. Thus, employee performance positively affects organisational performance, when employees better understand how their contributions affect the overall strategic goals, vision and mission of the organisation. Employee performance aligns Human Resources Management (HRM) practices in ways that maximise current, as well as future employee performance. Likewise, Strategic Human Resource Development (SHRD) accentuates optimum, utilisation of human capital, knowledge, skills and abilities to meet organisational goals [32]. It thus, integrates organisational goals and mission, leverages supportive human resource management (HRM) practices, ensures accountability and creates a learning culture [32]. This approach to public sector human resource management is rooted in New Public Management's (NPM) paradigm shifts from a classic bureaucratic approach of HRM to a performance-based culture of HRM. New Public Management (NPM) [33,34] advocates consistently managing employee performance through set goals and entails multiple related practices: planning, monitoring, evaluation, and recognition of employees' performance [35, 36].

2.3 Guiding theory - Human Capital Theory

Human Capital Theory has constituted a fecund research analytical lens, since its genesis in the early 1960s [37]. Its fundamental principle is the conviction that human learning potential is on par with other resources used in the creation of goods and services. It contends that education and training are the best ways for a person to gain knowledge, competence, and expertise [38]. Strong communication, information acquisition, knowledge development, and knowledge transmission skills are thus highlighted by the concept of

human capital. It aims to elucidate the benefits of investing in human resources through education and training. Its core thesis is that people are a type of development capital [37]. However, this idea has been criticized by academics who structure their thinking on social issues around a conviction that capital exploits labor. For instance, the positional competition and status that are highlighted in [39] work on social reproduction in education are concepts that human capital theory is unable to account for. He contends that rather than being optional extras, family cultural capital and social capital networks are essential to explaining the benefits of education and training. Other scholars have argued that socially differentiated educational outcomes are a function of prior inequalities and institutional stratification in education, rather than individual choices about self-investment in education and are reproductive [38,40]. Thus, the emergent weakness of human capital theory is lack of realism [39].

Given that education/work and educator professional development relations entail complex and multiple phenomena, and no theorization can contain all phenomena, while retaining a bounded coherence, Human Capital Theory provide useful insights to this study. Educators in the ECDoE are expected to upgrade their skills, in tandem with the strategic plan and vision of the Department. When the ECDoE views its employees as human capital, it becomes imperative that it shows that, it values human capital development by devoting resources towards the training of educators and other employees. By equipping educators with relevant skills and knowledge, the ECDoE builds much needed human capital and capacity for the realisation and achievement of its strategic plan, and its 2019-2023 Education System Transformation Plan (ESTP) [23]. This resonates with the Social Cognitive Career Theory (SCCT) [40, 41]. Based on this theory, Social Cognitive Career Theory factors which influence individuals' career decisions and sense-making process; include financial decisions, career goals, personal development and academic achievements. Individual educators can thus be motivated to attend various professional development activities to improve their pedagogical and classroom practices [30]. Hence, Human Capital Theory offers a strong theoretical lens for understanding social economic structures and human capital investment and development, which promotes school effectiveness and creates public value [9,42].

3. Materials and Methods

The study's goal was to investigate the relationship between employee (educator) performance and training effectiveness in the Eastern Cape Department of Education, South Africa. The study employed a positivist, quantitative research strategy and explanatory research design. Two hundred and seventy (n=270) educators (teachers) who work in the Buffalo City Education District and who teach Grades 10, 11, and 12 were sampled and a survey questionnaire was used to collect empirical data from the participants. The sample size was determined using the Slovin formula, which resulted in a rounded figure of 270 educators. A Likert scale with a range of one (strongly agree) to five (strongly disagree) was used for the survey questions. The survey questionnaire's internal consistency and reliability were measured using Pearson's coefficient and Cronbach's alpha, respectively. If an item's coefficient alpha value was 70 or higher, it was considered to have acceptable internal consistency. To establish the association between employee (educator) performance and training effectiveness in the Eastern Cape Department of Education hypothesis was developed and tested. With the aid of the SmartPLS programme, data was analysed using Structural Equation Modelling (SEM). To establish the relationship between employee (educator) performance and training effectiveness, simple linear regression analysis was

used. The researchers sought participants' written consent after obtaining informed consent. Ethical clearance was obtained from the University Research and Ethics Committee (UREC) and ethical clearance certificate number SIB011SZIN01 was issued. Permission to conduct the study was also obtained from the gatekeeper institution, the province of the Eastern Cape Department of Education.

4. Results and Discussion

Training and development programmes in the ECDoE were assessed by evaluating various factors, such as the impact of training on educator performance, student outcomes, and the overall improvement in the educational system.

Table 1

Effectiveness of training in the Eastern Cape Department of Education

Itemised statements	Frequencies				Descriptive		
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	St Dev
1. I am readily equipped with the appropriate skills and knowledge needed to perform my job.	39.13%	22.17%	15.65%	16.09%	6.96%	2.30	1.318
2. The training makes me confident to perform my job effectively	39.57%	21.74%	16.09%	16.96%	5.65%	2.27	1.295
3. The training has made me more tolerant to learners during learning and teaching process	40.00%	23.48%	13.04%	16.96%	6.52%	2.27	1.316
4. The training made me to venture into new methods of teaching to improve learners' performance.	38.26%	23.91%	16.09%	17.39%	4.35%	2.26	1.254
5. The training makes me more productive and efficient in the teaching and learning process	40.00%	21.30%	17.83%	15.65%	5.22%	2.25	1.273
6. The training has provided me with valuable workplace skills.	38.70%	25.22%	12.61%	19.57%	3.91%	2.25	1.262
7. The training was relevant to my career and profession	40.00%	24.35%	12.61%	19.57%	3.48%	2.22	1.257
8. The goals of the training were clearly communicated to trainees	36.52%	27.83%	16.09%	16.09%	3.48%	2.22	1.200
9. The training was well organised, informative and understandable	37.39%	30.87%	16.96%	11.74%	3.04%	2.12	1.130
10. My skills and knowledge at work has improved because of employing new teaching and learning methods.	38.26%	23.04%	13.91%	20.43%	4.78%	2.31	1.294
11. The learner's results have improved after I have received training on media of instruction and curriculum development	38.70%	25.65%	16.96%	13.48%	5.22%	2.21	1.236
12. My performance on the job has changed positively as a result of innovations acquired from the I have attended.	38.70%	23.04%	17.39%	14.78%	6.09%	2.27	1.279

Note: St Dev- Standard Deviation. *Source: Developed by Authors.*

4.1 Relevance of training to educators' career and profession

To establish whether the training was relevant to educators' career and profession, response patterns from Items 1 and 7 in Table 1 were analysed. From the results presented in Table 1, 61.30% of the respondents disagree with Item 1 statement; "I am readily equipped

with the appropriate skills and knowledge needed to perform my job” (39.13% Strongly Disagree and 22.17% Disagree). For Item 7 statement; “The training was relevant to my career and profession”, 64.35% Disagreed, (40% Strongly disagreed and 24.35% Disagreed). These results are a cause for concern, given that they may be suggestive or indicative of the view that the training provided by the ECDoE could be lacking relevance in terms of enhancing skills and capacity and career professional development of educators. Considering these results, it is of paramount importance that skills development programmes be closely aligned with participants' Key Performance Areas (KRAs) and individual needs analysis and skills audits. As such, these results point to the critical need for establishing training needs and value propositions of professional development training for educators, which for all intents and purposes must not merely be a prescribed box ticking top-down approach to human capital development. Rather, it is salient that the ECDoE's training and development be informed by individual needs analysis of educators, if training programmes are to effectively address skills and capacity gaps. As insightfully pointed out by [3] individual needs analysis allow organisations to explore the performance, skills, and knowledge gaps that diminish employee productivity. In a similar vein, according to [13] an analysis of individual needs can help companies determine which employees in a company need training and what kind of training they need. Needs analysis enables organizations to proactively address prospective employee performance issues before they materialize [19]. As a result, requirements analysis enables HRD professionals to identify employee knowledge and skill gaps before they start to cause actual problems that may have an impact on output and performance [22].

4.2 Organisation and purpose of training

An investigation into the organisation and purpose of the training was based on the responses on items 8 and 9 from Table 1. Results show that the purpose of the training was not clearly communicated to the trainees. Table 1 shows that 64.35 percent of participants disagreed with the statement “The goals of the training were clearly communicated to trainees”, (36.52% Strongly Disagreed and 27.83% Disagreed). In terms of organisation of the training (Item 9), 68.26% of respondents disagreed with the statement which suggests, “The training was well organised, informative and understandable”, (37.39% Strongly Disagreed and 30.87% Disagreed). These results are in line with a study conducted by [1] which concluded that many skills development programmes fail, due to lack of communication to participants on why they need to participate in skills development training. This implies that communication is critically important in informing participants about the purpose of a training programme. In some instances, [30] believe that participants frequently do not fully understand the importance of training to the point that some just do it out of obligation or view it as a chance to partake in extracurricular activities like stipends and rewards for attending training sessions. Hence, according to [29] low investment in training portfolios by organisations who offer training facilities result in poor organising and irrelevant information for the participants.

4.3 Relevance of training to job performance

The study further sought to establish the effectiveness of training by analysing the relevance of training provided by the ECDoE's for employee (educator) work performance. The study analysed response patterns of Items 2 and 6 in Table 1. Results showed that most respondents did not endorse the training provided by the ECDoE as relevant to job performance. Data analysis indicated that 61.31% (39.57% Strongly Disagreed and 21.74%

Disagreed) of respondents disagreed with the proposition that; “*The training makes me confident to perform my job effectively*”. Additionally, 63.92% (38.70% *Strongly Disagreed*, and 25.22% *Disagreed*) of the respondents disagreed with the proposition that; “*The training has provided me with valuable workplace skills*”. Results presented in Table 1 tend to suggest that training sessions organised by the Eastern Cape Department of Education might be falling short of adding much value towards educators’ task performance. As postulated by [2] the main purpose of training is to improve job performance. If there is no improvement after training, then it is rendered ineffective; and corrective measures will need to be taken for future training to be effective. Training is crucial to enhancing employees’ abilities to perform their jobs effectively [29]. As a result, the main objective of training is for participants to master the knowledge, skills, and behaviors that are emphasised in the training programs and apply them to their daily work activities. It therefore goes without saying that training programmes must closely align with the training needs of employees and must significantly contribute to skills acquisition, enhancement and job performance. It is crucial for organisations to implement skill development efforts that improve the capabilities and knowledge of their human capital resources in this setting [1]. Organisations like the Province of the Eastern Cape Department of Education can effectively work towards attaining the objectives, mission, and vision envisioned in their strategic plan by putting such programmes into practice.

4.4 Impact of training to the teaching and learning process

Programmes for training and development can increase performance and boost academic outcomes. Only by focusing teacher education on improving the teaching and learning process will this be possible. Data analysis sought to analyse and establish the distribution pattern of respondents to Items 4 and 5 (Table 1) which are deemed descriptors of the teaching and learning process. Results show that most respondents did not ratify the training provided by the ECDoE as adding value to the teaching and learning process. As shown in Table 1, 62.17% (38.26% *strongly Disagreed*, and 33.91 *Disagreed*) of the respondents disagreed with the proposition that “*The training made me to venture into new methods of teaching to improve learners’ performance*”. Similarly, 61.30% *Disagreed* (40% *Strongly Disagreed*, and 21.3% *Disagreed*) with the statement; “*The training makes me more productive and efficient in the teaching and learning process*”. It can thus be argued that training programmes should aim at improving efficiency, effectiveness, and performance of educators to improve learner achievement in matriculation results. Training and development enhances teacher and student performance [2]. Due to a poor management system implementation and insufficient levels of educator participation, Continuous Professional Teacher Development (CPTD) is a concern in South Africa. This problem is exacerbated by inadequate professional development provisioning, CPTD system being viewed as a South African Council for Educators (SACE) thing, an unreliable and invalid needs identification system and lack of capacity or will and low levels of reporting. The root causes of these problems, amongst others include; Professional Development Plans (PDPs) not being compiled, School Management Teams (SMTs) not clear on their roles and responsibilities, inadequate monitoring and evaluation (M&E) and lack of consequences for non-participation [9]. The consequences of the weak CPTD amongst others, are low quality professional development activities, reduced lifelong learning culture, competence in professional practice adversely affected, decreased educator professionalism, teaching and learning not improving

accordingly, weak educator performance culture and attendant decreased learner attainment and achievement in National Examinations and international benchmarking assessments [13].

Hence, to improve implementation of the new curriculum, and achieve better learner outcomes, there is need to increase learners' performance and teacher practice. In addition, [14] pointed out that educators should pursue Continuous Professional Teacher Development to hone their subject-matter expertise, pedagogical content understanding, and teaching techniques. More importantly, the Department's Strategic Plan and Performance Management System must be closely aligned with educators' KPAs, KPIs, whole school improvement, and school effectiveness goals and targets. By so doing it becomes feasible for the aims and outcomes of public sector organisations such as the province of the Eastern Cape Department of Education's Strategic Plan to be achieved [30,43].

4.5 Change of attitude of educators after receiving training

Effective training should change the perspective of educators in terms of how they behave, relate, and respond to the dynamics of shifting teaching and learning environments. Hence, it was imperative to establish whether the training provided by the ECDoE transformed the attitude of educators. Items 3 and 4 as shown in Table 1 were analysed to establish perceptions of respondents regarding the influence of training on attitude change to effective teaching. As shown in Table 1, results showed that 63.48% (40% *Strongly Disagreed* and 23.48% *Disagreed*) of the participants disagreed with the statement; "*The training has made me more tolerant to learners during the learning and teaching process*". For Item 5, 62.17% (38.26% *Strongly Disagreed* and 23.91% *Disagreed*) of the participants disagreed with the statement which states that "*The training made me to venture into new methods of teaching to improve learners' performance*". This finding could suggest that the training provided by the ECDoE lacked relevance in transforming the attitude of educators regarding their work performance. It is critically important that training programmes change and mould the behaviour of educators after training. As pointed out by [28] training programmes should be supporting activities that cement and improve the capacity of employees to achieve optimum performance. Thus, Continuing Professional Teachers' Development training programmes must in essence engage educators in lifelong learning to improve their knowledge, skills and ensure that educators stay current and better equipped to positively impact on learner performance and achievement [9,16,18].

4.6 The educator performance changed positively due to training received

Training of educators can increase performance and boost academic outcomes. This is only possible if teacher education programmes are designed to enhance participants' abilities, knowledge, and capabilities in the teaching and learning process. As shown in Table 1, 61.30% of the participants disagreed (40% *Strongly Disagreed* and 21.30% *Disagreed*,) with the statement which reads, "*The training makes me more productive and efficient in the teaching and learning process*". These findings might imply that teachers lacked the necessary competencies to help the Department fulfil the goals of the Strategic Plan. This may also be indicative of weak levels of Continuing Professional Teachers' Development functionality and usability in achieving the goals of the Eastern Cape Department of Education. As indicated by [10] unreliable and invalid needs identification, could lead educators to viewing Continuing Professional Teachers' Development as a SACE thing, and seeing it as an unnecessary add on and leading them to question, it as "what is it in it for me?"

4.7 Improvement of learners' results after receiving training

The Eastern Cape province has over the years been persistently recording the lowest Matriculation examination pass rates, except for the 2022 academic year in which the province ranked six out of the nine South African provinces at 77.3% pass rate. Hence, the dire need for Continuing Professional Teachers' Development training programmes that capacitate educators with relevant skills and knowledge to improve learner achievement. Table 1 results indicate that 64.35% (38.70% *Strongly Disagree* and 25.65% *Disagree*) of the respondents Disagreed with the statement; "The learners' results have improved after I have received training on media of instruction and curriculum development". These findings imply that most educators did not have access to training programmes on curriculum creation and media of instruction, which could improve learner achievement. In [44] view, organisations should give priority to training programmes that leverage and maximize goal achievement and employee (educator) performance.

Therefore, it is crucial for organizations in the public sector to invest in human capital resources and to make sure that workers develop the skills, knowledge, and competences needed in a variety of constantly changing learning situations. More importantly, [43] mention that using instructional media is essential for bridging the knowledge gap between students' existing knowledge and the curriculum's learning objectives. Methods of instruction help students retain knowledge, stimulate interest in the subject, and understand concepts much better and clearer. Continuous professional development in the use of instructional media is thus critically significant in the teaching-learning process [36].

5. Simple linear regression and hypothesis testing

Notwithstanding that training and development are beneficial to trainees regardless of the level of strategic planning involved and the type of the training, the value addition depends in part on the Strategic Human Resource Development plan used to guide the human capital development programmes. It was thus critically significant that the study establishes statistical validation rather than simply basing findings on assumptions and theoretical literature. To test this correlation, the study used simple linear regression to evaluate the relationship between employee (educator) performance in the Eastern Cape Department of Education and training effectiveness. To determine the relationship between these variables, three distinct simple regression statistical tests were performed. This study only presents the first simple linear regression model.

Hypothesis 1:

- **H1₀**: There is no relationship between employee performance and effectiveness of training alignment with the ECDoE's strategic plan.
- **H1₁**: There is relationship between employee performance and effectiveness of training alignment with the ECDoE's strategic plan.

Table 2

Model summary for effectiveness of training

Model	R	R Square	Adjusted R Square	Standard. Error of the Estimate	Durbin-Watson
1	0.905 ^a	0.818	0.817	0.533	1.550

Note: ^a Predictors: (Constant), Effectiveness of Training

Source: Developed by Authors.

We use effectiveness of training as an independent variable (x) to evaluate whether it has a positive influence or not on employee (educator) performance as response variable (y).

The results presented in Table 2 indicated that in model one "1", both $R^2 = 0.818$ and the adjusted R square "0.817" are significantly higher (above 50%). This suggests that our independent variable "Effectiveness of Training" explain over 81% of the variability of our dependent variable "Educator Performance". In addition, the Durbin-Watson is 1.550, suggestive of the nonexistence of multicollinearity. As a result, it is safe to conclude that the model was appropriate for hypothesis testing. Although the model fits the data, it is necessary to also test whether the regression model statistically and significantly predicts the outcome variable employee performance. Therefore, the ANOVA table presented in Table 3 was extracted.

Table 3

ANOVA statistical significance						
Model	Sum of Squares	Df	Mean Square	F	Sig.	
Regression	291.532	1	291.532	1026.481	0.000 ^b	
Residual	64.755	228	0.284			
Total	356.287	229				

Note: ^bPredictors: (Constant), Effectiveness of Training; Sig-Significance; Df -Degrees of Freedom; F- F- statistics.

Source: Developed by Authors.

The results presented in Table 3 shows that the regression model used in this analysis predicts the dependent variable (Educator Performance) significantly well. In the "Regression" row under the "Sig." column, the p-value is less than 0.05. Therefore, we can conclude that "model one 1" $F(1026.481)$ with a mean square of "291.532", and a $p=0.000$; the sig or P-value less than 0.05 is a significant fit to predict the dependant variable employee performance. To conclude the existence and significance of the relationship, the coefficients are presented in Table 4.

Table 4

H ₂ : Regression model coefficients for Effectiveness of Training						
Model		Unstandardised Coefficients		Standardised Coefficients		Sig.
		B	Std. Error	Beta	t	
1	(Constant)	0.240	0.072		3.307	0.001
	Effectiveness of Training	0.908	0.028	0.905	32.039	0.000

Note: Std. Error- Standard error; t- t- statistics; Sig- Significance.

Source: Developed by Authors.

Considering the readings from the Table 4, under the "Effectiveness of Training" row and "Sig." column of Table 4, the readings indicate that the relationship between "Effectiveness of Training" and "Employee (educator) Performance" is statistically significant at prediction (probability) $p < 0.05$, or ($B=0.908$, $P=0.001$). According to the positive beta value of "0.908" for "Effectiveness of Training," a 1-unit proportional increase in "Effectiveness of Training" results in an increase in "Employee (educator) Performance" of 90.8%. As a result, we may draw the conclusion that "Effectiveness of Training" significantly and favourably affects "Employee (educator) Performance." The visual display of the relationship is presented in Figure 1.

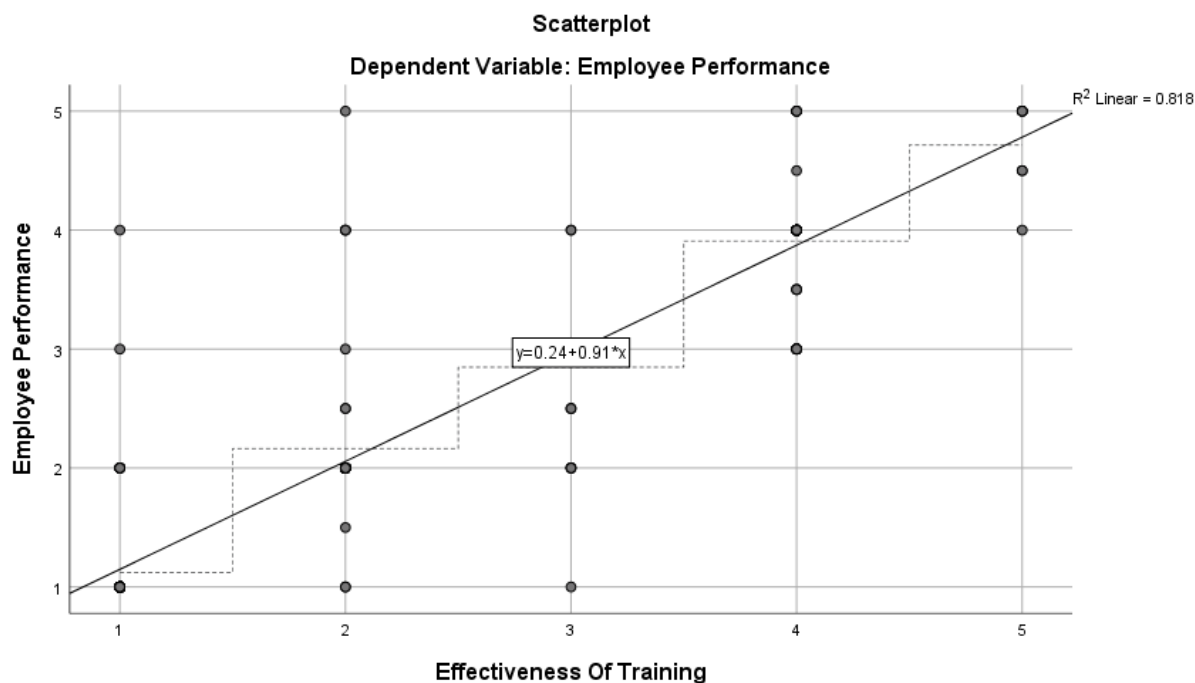


Figure 1. Scatterplot effectiveness of training and employee performance.

Source: Developed by Authors.

These findings are in line with research done by [19], which showed that training programmes assist employees to improve their attitude towards work, which is also an important factor necessary for improved performance. This means that skills development programmes help employees gain the right set of skills and abilities to perform better and thus improve their performance. Additionally, Helmbold et al. affirm that effective training outcomes have a favorable impact on better educator and learner performance, the development of job knowledge and skills at all levels of the organisation, an uptick in employee morale, and helps staff members achieve organisational goals [6]. The mission of the organization, the goals it is pursuing, and the physical, social, and economic environments in which the organization is operating can all positively affect employee (educator) performance [22]. The benefits of training and Continuing Professional Teacher Development for educators' knowledge, abilities, competences, and behaviour are numerous [45]. The result of this survey indicates that training improves performance through developing skills and competences. Training programmes shorten the learning curve for people starting new jobs after being hired, transferred, or promoted, and training bridges the performance gap between what should and is occurring [10,28]. Resultantly, we can conclude that there is a relationship between Employee (educator) performance and effectiveness of training aligned with the Eastern Cape Department of Education's strategic plan goals; therefore, we reject the null hypothesis:

- ***H_{2o}: There is no relationship between employee (educator) performance and effectiveness of training aligned with the Eastern Cape Department of Education's strategic plan goals.***

6. Limitations of the study

One major limitation is that the study's results may not be representative or applicable to a broader context. Due to the study's use of a quantitative research methodology, the conclusions and ensuing inferences are based on the participants' unbiased opinions as well

as the extant literature reviewed. As a result, the conclusions in this study may be generalisable with caution to the entire population or the particular setting of this study. Given the aforementioned constraints, it is recommended that future studies may also focus on evaluating opportunities and obstacles connected with adopting Continuing Professional Teacher Development programmes for improved learner performance and achievement.

7. Conclusions and Recommendations

Strategic Human Resource Development integrates and aligns training and development with organisational missions, goals and strategy to improve performance. As such, it is significant that the province of the Eastern Cape Department of Education develops and implements skill development programmes which enhance the performance of educators as envisaged in its strategic plan. Effectiveness of training measures the impact of training on the trainee's knowledge, skills, performance and the organisation's productivity. Hence, training goals, objectives and skills needs analysis should be determined before training occurs, and training goals must be clearly and accurately measured. Measuring the impact and effectiveness of training ensures that training in the organisation is relevant, effective and efficient. Measurement allows public sector organisations to match the costs outlaid in the training's design and implementation with the associated benefits its employees and as well as the organisation receive. Effectiveness of training can be achieved through identifying employee training needs, designing learning programmes, and collecting feedback from trainers and educators. Communication is key to informing educators about the purpose of the training and the expected outcomes of training during training programmes. Trainees need to be fully informed about the importance and purpose of the training and the products of training, so that they can cascade the training to others who were not able to attend. Training programmes should not be seen as a chance to enjoy the extracurricular activities that comes with the training, such as stipends and rewards provided for attending training sessions; rather it should be viewed as a way of acquiring new knowledge, competencies and skills to improve educator performance and ultimately learner achievement.

The study recommends that the province of the Eastern Cape Department of Education should collaborate with locally based Universities and other capacity building institutions in South Africa and utilise *Funza Lushaka* bursaries to capacitate and continuously upgrade the pedagogical skills and competencies of educators. The Department should utilise different forms of training, including but not limited to; coaching, mentoring, community of practice, action research, school clusters and the cascading model. School-based Continuing Professional Teacher Development continuously enhances the quality of teaching and learning. Educators need to be continuously and professionally capacitated to adapt to new curriculum changes within subjects' content areas. More importantly, skills development programmes must closely align with employees' Key Performance Areas, Key Performance Indicators, Performance Development Plans and individual needs analysis. Individual needs analysis allows organisations to explore the performance, skills, and knowledge gaps which negatively affects employee (educator) performance. As such, training and Continuing Professional Teacher Development must essentially align with the training needs of employees, if they are to significantly contribute toward skills acquisition, productive employee work performance and ultimately strategic plan goal achievement.

Acknowledgement: The authors acknowledge the University of Fort Hare for its affiliation support.

Conflicts of Interest: The authors declare no conflict of interest.

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Citation: Zindi, B.; Sibanda, M.M. Relationship between training effectiveness and educator performance in the eastern cape department of education, South Africa. *Journal of Social Sciences*. 2023, 6 (3), pp. 87-103. [https://doi.org/10.52326/jss.utm.2023.6\(3\).07](https://doi.org/10.52326/jss.utm.2023.6(3).07).

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Submission of manuscripts:

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[https://doi.org/10.52326/jss.utm.2023.6\(3\).08](https://doi.org/10.52326/jss.utm.2023.6(3).08)
UDC 069:004:37.015



BUILDING THE MUSEUM CULTURE OF STUDENTS AND PUPILS THROUGH MUSEUM EXHIBITIONS IN THE INFORMATION TECHNOLOGIES ERA

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Received: 07.14.2023

Accepted: 08.22.2023

Abstract. Museum exhibitions are of major importance in the formation of museum culture of students and high school students, providing unique opportunities for research, learning and exploration of various cultural, historical, scientific and artistic fields. The study carried out elucidates an experimental scientific research focused on the valorization of museum exhibitions in the formation of museum culture (FMC) of students and high school students by exploring information technologies. The purpose of this research is to conceptualize the FMC of students and high school students through the elaboration of the praxeology of the targeted process in an age of information technologies. Research hypothesis: FMC of students and high school students through the museum exhibition, will be possible by determining, revealing and validating the theoretical-applicative foundations of the given process. Theoretical methods were used: analysis, synthesis, comparison and interpretation of the obtained results and practical methods: questioning, observation, pedagogical experiment, etc. Discussing and verifying the obtained results we identified, that the activities carried out during the training stage generated a positive impact on the FMC of students and high school students reflected in the change of attitudes, behaviors and value contents. The research allowed us to find that the museum exhibition can become an effective strategy for the culturalization of students and high school students on the three essential dimensions: institutional, professional, social, ensuring the promotion of national and universal values in the context of lifelong learning/permanent education.

Keywords: *museum, museum education, museum pedagogy, museum culture, museum exhibition, values, museum collections, information technologies, students, pupils.*

Rezumat. Expozițiile muzeale sunt de importanță majoră în formarea culturii muzeale a studenților și liceenilor, oferind oportunități unice de cercetare, învățare și explorare a variate domenii culturale, istorice, științifice și artistice. Studiul realizat elucidează o cercetare științifică experimentală axată pe valorificarea expozițiilor muzeale în formarea culturii muzeale (FCM) a studenților și liceenilor prin explorarea tehnologiilor informaționale. Scopul acestei cercetări constă în conceptualizarea FCM a studenților și liceenilor prin intermediul elaborării praxiologiei procesului vizat într-o epocă a tehnologiilor informaționale. Ipoteza cercetării: FCM a studenților și liceenilor prin intermediul expoziției muzeale, va fi posibilă

determinând, dezvăluind și validând fundamentele teoretico-aplicative ale procesului dat. Au fost utilizate metodele teoretice: analiza, sinteza, compararea și interpretarea rezultatelor obținute și metodele practice: chestionarea, observarea, experimentul pedagogic etc. Discutând și verificând rezultatele obținute am identificat, că activitățile desfășurate în cadrul etapei de formare au generat un impact pozitiv asupra FCM a studenților și liceenilor reflectat în schimbarea atitudinilor, comportamentelor și conținuturilor valorice. Cercetarea a permis să constatăm că expoziția muzeală poate deveni o strategie eficientă de culturalizare a studenților și liceenilor pe cele trei dimensiuni esențiale: instituțională, profesională, socială, asigurând promovarea valorilor naționale și universale în contextul învățării pe tot parcursul vieții/educație permanentă.

Cuvinte cheie: muzeu, educație muzeală, pedagogie muzeală, cultură muzeală, expoziție muzeală, valori, colecții muzeale, tehnologii informaționale, studenți, liceeni.

1. Introduction

The museum exhibition still remains the most important form and strategy of museum education regarding building the museum culture of all categories of audience, regardless of the geographic area, ethnic origin, social status, family status as well as the level of cognitive development. According to modern concepts, the museum exhibition supposes the exposing of museum objects/exhibits, scientifically founded, compositionally, artistically and aesthetically organized, being labeled with textual descriptions, information and orientation boards, creating the image and specifics of museum, according to N. V. Myagtina [1, p. 95].

The history of apparition and the genesis of museum exhibitions, which served as inspiration sources, researched and culturized can be traced back to the ancient times with the establishment of *mouseion*, initially holly places dedicated to Muses, and later any social or cultural institutions owning large collections of artistic and scientific works, worship items etc. [2, p. 16]. The structural and economic changes within the society, up to modern era, resulted in fundamental modifications in the process of organising and conducting the *museum exhibitions*, thus combining the creative and technological processes, involving the competent specialists' teams covering different domains of activity as: museology, design, psychology, pedagogy, engineering, etc. In creation of a modern museum exhibition, focused on education, is aimed the testing of some particular modern strategies and mechanisms intended to produce the maximal impression over the museum audience, to trigger the interest over the content of exposed values, and maintain it.

The Romanian researcher C. Cucos states that *through the interaction with the virtual we can dive in some context, ascertain how something moves or operates, how it sounds, at the same time we can manipulate the object, evaluate the texture, weight, dimensions, smell etc* [3, p. 199].

So, the usage of information technologies in performing the museum exhibitions contributes to revitalization and extending the museum connections over a larger audience, implying in person as well as virtual tours. A high-quality virtual program, meant to promote the museum heritage, can be a valuable pedagogic tool for a higher efficiency education and culturalization process of the students and pupils.

Beginning with the importance and necessity of education and formation of museum culture of growing generations through valorisation of national and universal heritage, we outline that for supporting this dimension were built and ratified a set of normative acts, laws, ordinances, that offers opportunities and improvement mechanisms of insertion of museum culture into all education levels. Especially relevant in our opinion being: The law

of museums nr. 262 from 07.12.2017 [4]; National strategy of development Moldova, 2030 [5]; Council of Europe Framework Convention on the value of cultural heritage for society, FAR), 27th October 2005 [6], which offers strategies on promoting the cultural patrimony and the information society [7].

2. The praxeology of the organising and conducting of museum exhibitions within the context of pupils and students culturalization

The analysis of the specialty literature [8-11] allowed to conclude that the process of organizing, conducting, and implementing of information technologies in building and valorisation of museum exhibition is required to meet the following criteria:

- specification of the generic theme of the exhibition;
- facilitation of access to the thematic museum collections;
- building of a multidisciplinary team of specialists, highly competent and dedicated to the aimed domain, which will ensure the necessary support for exposing the museum collections;
- equipping of facilities with expositional technologies, which will ensure the necessary support for exposing the museum collections;
- ensuring and renovation of the required technical-material resources.

Within the same research area, we point out that the design of the museum exposition configuration and the facilities connected to them, is achieved in compliance with following important components:

- scientific design, which supposes the elaboration of the basic concept and the contend of the exhibition;
- artistic design, focusing the artistical and plastic approach of the exhibition;
- technical-material design, pointing the place of each exhibit, text label and technical means, according to N. V. Myagtina [1, p. 99].

The performed empirical and theoretical study allowed us to supplement the above requirements with some more:

- a comprehensive analysis of the domain, generic and theme of previously conducted exhibitions within the museum;
- conceptualizing and developing a preliminary plan of the exhibition project;
- designing the exhibition organising-conducting technology and revealing the required human resources/experts which will be involved in its maintenance;
- analysis and discussion of the whole exhibition organising-conducting and monitoring process;

In accordance with our study framework ideas, the researchers of the domain A. V. Anufriev, V. P. Shaherov, S. L. Shaherova, stated that exhibits/components of *museum exhibitions*, must carry a logical, common, and integral meaning aiming the optimal interaction and relation with the visitors. The museum exhibit selected for exposing is required to meet following physical, aesthetical, and technological requirements of interaction with visitor:

- informativeness;
- accessibility;
- expressiveness;
- attractiveness [12, p. 19].

Thus, we can conclude that each outlined properties of museum exhibit, develops a fertile environment meant to stimulate the active, participatory, and heuristic learning within from the observing reception, analysis, reflection and interpreting of museum exhibits.

Within the related consensus, the researchers [12-14] states that the grouping of the objects representing the *museum exhibition* follows these principles:

- **valueness**, exhibition is composed of aesthetically and culturally valuable items;
- **unity and scientificity**, exhibitions are researched, conceptualized, and designed according to fundamental scientific criteria;
- **feedback**, exhibition is designed in conformity with age, level of personal development as well as other particularities of the audience;
- **accessibility**, elaborating and presenting the of museum exhibition is determined by socio-cultural environment.

Obviously, a well-designed *museum exhibition* elaboration and presentation concept, becomes a key-factor in formation-developing of all categories of audience (general education) or a particular contingent (specialized education, specialized students) interest and motivation in museum culture. Also is necessary to point out that both, selection principles of museum objects for *museum exhibitions*, as well as presentation technologies combined with informatisation actions, should focus on education, cultivation and promoting the museum patrimony among children, pupils, students and adults.

The researcher A. V. Sherbina considers that modern exhibitions can be also can be segregated in following essential categories:

- **contemplative**, such an approach is typical for arts museums and galleries where the exhibits are selected and exposed according to some aesthetical criteria, assuring the sensibilisation of the audience in respect to artistic value and authentic plastic perception;
- **thematic or didactic**, this type of exposing is specific especially for historical and scientific museums, where through technological means of interpretation, the museum objects are placed in some social, historic, cultural, or scientific context;
- **environmental**, in such exhibition is reproduced the atmosphere of human habitat, where have been created and used some exhibits from museum heritage;
- **systematic**, in such exhibitions the setup of objects locations from museum collection is performed into some particular order, accompanied by stands with detailed information about those;
- **interactive**, this type of exposing involves the visitor in a dialog with exhibition, for this purpose using a set of multimedia technologies, aiming to reproduce historical events of some epochs.
- **applied**, such an expositional organisation supposes a direct interaction of visitor with objects within the museum exhibition and access to the research collection [15, p. 24].

We point out the fact that museum exhibitions represent the most important way of materialization and optimal presentation of museum offers, area of interaction and communication with its audience.

3. Materials and Methods

The current research included a set of theoretical methods: scientific documenting, comparative analysis, synthesis, generalization, systematization, etc; empirical methods: polling, conversation, scientific observation, the experimental approach to ascertainment,

formation and validation; statistic-mathematical methods which backed us in processing and interpreting results, etc.

In context of theoretical research, I examined the epistemology of formation of museum culture (FMC) problem of students and pupils by museum exhibition means in the information technology age. The epistemological study and the analysis of specialty literature have grounded the conceptualization and led to the defining and delimitation of basic concepts, establishment of new theories, approaches and ideas of researchers who contributed to improvement of FMC of students and pupils.

The experimental research supposed the involvement of experimental group of students, 27 students and 27 pupils, and the totality of tools developed and validated which focused on students and pupils opinions over FMC, after watching museum exhibitions, performing surveys of students and pupils; *Counselling program and FMC of students and pupils via museum exhibition in the information age*, meant to trigger the interest and increase the educational cohesion with the discursive space of the museum exhibitions.

The praxiological approach of building the students and pupils culture via museum exhibition in information age was performed in *Before-And-After* method, reflecting the investigation methods described so far.

4. Results and Discussion

The experimental research focused on the conceptual frame research and analysis of State documents, researcher's theories and approaches identified as relevant for developing and scientific grounding of the set of pedagogical tools, valorised in organising and conducting the described pedagogic experiment.

The pedagogic experiment of research emphasizes three stages: constation, developing and checking/verifying, being emphasized the purpose and the objectives. The study was performed on an experimental group where were implicated 27 students of the *Technical University of Moldova* and 27 pupils of the *Theoretical Lyceum Ion Luca Caragiale* from Orhei, conducted during 2019-2021 period with implication of teaching staff from the mentioned educational institutions, as well as museum staff from *National Museum of Fine Arts of Moldova*, *National Museum of Ethnography and Natural History of Moldova*, *National History Museum of Moldova*, etc.

At the ascertainment stage, in perspective of establishing and evaluating the real situation on the impact of museum exhibition on FMC of students and pupils, was developed and applied the *Opinion poll of students and pupils* with seven items, the responses supposed to be before and after formation, within the allocated facilities, with selection of one of three possible options.

The developing stage supposed the participants familiarisation with the museum education process, and building of museum culture via museum exhibitions. Were watched a set of virtual exhibitions according, organised various museum activities using computer graphic programs, online conferences etc., conducted within the *Counselling program and FMC of students and pupils via museum exhibition in the information age* framework, starting with several premises:

1. Developing the specific information technology exploration abilities and competences through increased involvement of students and pupils in formal, nonformal, research and experimental activities, regarding the formation of museum culture

2. Opportunities of applying the acquired competences which aims the museum culturalization level in professional and social contexts.
3. Continuous feedback over the messages provided by museum exhibitions, which develops the observation, reception, analysis, reflection and interpreting abilities.

Therewith, we emphasise the fact, that as an efficient achievement of the *Counselling program and FMC of students and pupils via museum exhibition in the information age* was directly impacted by such factors as: the componence of the group of educable; individual particularities of members; psychologic climate, social-cultural environment, etc.

There are following some of the formative research results, aggregated in distributed Tables 1 and 2.

Table 1

Responses regarding FMC of students, I-II year in the university (27 participants)

Item number and responses	Constating experiment		Verification experiment	
	Data	%	Data	%
1. Show interest in visiting and assimilation of museum exhibitions				
- showing no interest	6	22.22	-	-
- showing partial interest	16	59.25	3	11.11
- showing great interest	5	18.51	24	88.88
2. Use museum culture specific terminology in speech				
- not using	18	66.66	-	-
- partial using	7	25.92	2	7.40
- widely using	2	7.40	25	92.59
3. Claim that museum exhibition develops the cognition, creativity, and imagination in various contexts of learning and research				
- don't agree	8	29.62	-	-
- partially agree	15	55.55	3	11.11
- entirely agree	4	14.81	24	88.88
4. Are impressed visited by museum exhibitions				
- not impressed	10	37.03	-	-
- partially impressed	14	51.85	1	3.70
- very impressed	3	11.11	26	96.29
5. Shows interest in diversification the learning space, including through usage information technology				
- do not show interest	12	44.44	-	-
- shows partial interest	11	40.74	-	-
- shows active interest	4	14.81	27	100
6. Consider necessary conducting museum culture activities, including through usage of information technology within the educational institutions				

Continuation Table 1

- do not consider	22	77.77	-	-
- do not know	2	7.40	-	-
- consider very necessary	3	11.11	27	100
7. Suggestions for improvements of museum culture within the educational institutions				
- necessity of the civilization history knowledge	23	85.18	27	100
- necessity of national and universal works of art knowledge	25	92.59	27	100
- necessity of conducting of research activities of curricular subjects in museums through usage of information technology	24	88.88	26	96.29
- necessity of orientation of learning to knowledge and appreciation of museum exhibits/museum heritage	21	77.77	25	92.59

The data were obtained following the verification and comparison of the results reflected in the questionnaires by applying mathematical calculations within the experiment, at the ascertainment/initial stage and at the final verification stage.

As can be seen in the Table 1, the results obtained from the survey of the students on the constating stage and verification stage shows considerably different results. So, we conclude that students are being aware and greatly appreciates the impact of museum exhibition in FMC.

We continue with showing and interpreting the results obtained after surveying the pupils, as follows in the Table 2.

Table 2

Reponses of pupils regarding FMC (27 participants)

Item number and responses	Constating experiment		Verification experiment	
	Data	%	Data	%
1. Show interest in visiting and assimilation of museum exhibitions				
- showing no interest	8	29.62	-	-
- showing partial interest	17	62.96	4	14.81
- showing great interest	2	7.40	23	85.18
2. Use museum culture specific terminology in speech				
- not using	19	70.37	-	-
- partial using	5	18.51	3	11.11
- widely using	3	11.11	24	88.88
3. Claim that museum exhibition develops the cognition, creativity, and imagination in various contexts of learning and research				
-don't agree	7	25.92	-	-
-partially agree	16	59.25	2	7.40

Continuation Table 2

-entirely agree	4	14.81	25	92.29
4. Are impressed visited by museum exhibitions				
- not impressed	11	40.74	-	-
- partially impressed	13	48.14	2	7.40
- very impressed	3	11.11	25	92.59
5. Shows interest in diversification the learning space, including through usage information technology				
- do not show interest	11	40.74	-	-
- shows partial interest	12	44.44	1	3.70
- shows active interest	4	14.81	26	96.29
6. Consider necessary conducting museum culture activities, including through usage of information technology within the educational institutions				
- do not consider	22	77.77	-	-
- do not know	2	7.40	-	-
- consider very necessary	3	11.11	27	100
7. Suggestions for improvements of museum culture within the educational institutions				
- necessity of the civilization history knowledge	21	77.77	25	92.59
- necessity of national and universal works of art knowledge	24	88.88	26	96.29
- necessity of conducting of research activities of curricular subjects in museums through usage of information technology	25	92.59	27	100
- necessity of orientation of learning to knowledge and appreciation of museum exhibits/museum heritage	23	85.18	27	100

The data were obtained following the verification and comparison of the results reflected in the questionnaires by applying mathematical calculations within the experiment, at the ascertainment/initial stage and at the final verification stage.

Obviously, the results obtained after formation of the pupils, reflected in Table 2 shows that museum exhibitions contribute substantially to FMC of pupils through promoting, knowledge and appreciation of the national heritage.

The data were obtained at the final stage of the experiment by applying mathematical calculations to compare the FMC results of students and high school students.

On the stage of validation of data obtained, comparing results, we conclude that the difference between the two groups is insignificant. Since on initial constatation stage both, students and pupils, shown minimal knowledge of FMC, we conclude that conducted activities within the formation process had a positive impact over the FMC of students and pupils in resulted in the attitude, behaviour and value content changes.

4. Conclusions

In conclusion we consider that our research is current, original and necessary for the promotion of the museum treasure, and the results obtained confirmed the launched hypothesis and contributed to the solution of the scientific problem, focused on the pedagogical, theoretical and praxeological foundation of FMC of students and high school students through museum exhibitions in the age of information technologies. The given investigations have shown that museum exhibitions can contribute essentially to the formation of the museum culture of young people, strengthening their development as citizens who are informed and interested in cultural heritage. In the same way, we identified that the use of information technologies can stimulate the interest and involvement of students and high school students in exploring the museum treasure, offering them an interactive and engaging environment for experimentation. Therefore, our research makes relevant contributions to the field of museum culture formation, highlighting the importance of museum exhibitions and information technologies in the education of the younger generation. At the same time, it can serve as theoretical-practical support for educational institutions and museums in the elaboration, development and implementation of educational strategies in the context of promoting the national and universal cultural heritage among students and high school students.

The research carried out opens new and real perspectives for the in-depth investigation of FMC throughout the life span.

Conflicts of Interest: The author declares no conflict of interest.

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Citation: Filipski, T. Building the museum culture of students and pupils through museum exhibitions in the information technologies era. *Journal of Social Sciences*. 2023, 6 (3), pp. 104-113. [https://doi.org/10.52326/jss.utm.2023.6\(3\).08](https://doi.org/10.52326/jss.utm.2023.6(3).08).

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Submission of manuscripts:

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[https://doi.org/10.52326/jss.utm.2023.6\(3\).09](https://doi.org/10.52326/jss.utm.2023.6(3).09)
UDC 378.147:811.133.1(65)



WRITING WORKSHOPS IN FRENCH FOREIGN LANGUAGE AT THE ALGERIAN UNIVERSITY

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Received: 08. 12. 2023

Accepted: 09. 26. 2023

Abstract. This research takes stock of a didactic approach to remediation undertaken in a French foreign language class at the University of Blida 2. The experiment was initiated by a double observation. The first is the unsatisfactory quality of the texts produced by my students in the course of written comprehension-production, and the second being the negative relationship expressed by the latter vis-à-vis the literary modules. To remedy this, I designed a didactic device aimed at developing the scriptural skills of learners through the reading of literary short stories. The results generated by this study reveal a significant increase in the public concerned at the local level (microstructure) but especially on the global level (macrostructure) of the texts produced by the participants. Also, the data collected show the role of writing workshops in motivating learners to write in a foreign language. In addition, the literary short story has proven to be an effective educational tool to use in the language class to help learners improve their target language.

Keywords: *short story, writing workshop, written comprehension-production, remediation, students.*

Rezumat. Această cercetare face bilanțul unei abordări didactice a remedierii întreprinse într-o clasă de limbi străine (franceză) la Universitatea din Blida 2. Experimentul a fost inițiat printr-o dublă observație. Prima este calitatea nesatisfăcătoare a textelor produse de studenții mei în cursul de înțelegere-producție scrisă, iar a doua este relația negativă exprimată de acestea din urmă față de modulele literare. Pentru a remedia acest lucru, a fost conceput un dispozitiv didactic care vizează dezvoltarea abilităților scripturale ale cursanților prin lectura de nuvele literare. Rezultatele generate de acest studiu relevă o creștere semnificativă a publicului interesat la nivel local (microstructură) dar mai ales la nivel global (macrostructură) a textelor produse de participanți. De asemenea, datele colectate arată rolul atelierelor de scriere în motivarea cursanților să scrie într-o limbă străină. În plus, nuvela literară s-a dovedit a fi un instrument educațional eficient de utilizat la cursurile de limbi străine pentru a ajuta cursanții să-și îmbunătățească limba țintă.

Cuvinte cheie: *nuvelă, atelier de scriere, înțelegere-producție scrisă, remediere, studenți.*

1. Introduction

Durant des siècles, le texte littéraire était l'unique mode d'enseignement/apprentissage de langues étrangères. Il a connu son apogée avec la méthode grammaire-traduction avant de se voir détrôné et relégué au second plan. De nos jours, il constitue un support incontournable en classe de langues voué généralement à des fines pédagogiques: faire acquérir ou améliorer la compétence lexicale et métalinguistique des apprenants, améliorer la compréhension écrite/orale, l'expression orale/écrite, etc.: *"C'est dans le texte littéraire même, y compris et surtout avec des élèves en difficultés, que la langue se conquiert réellement"* [1, p.8].

Néanmoins, son utilisation en classe de langues étrangères peut revêtir d'autres objectifs : historiques, esthétiques, culturels, etc. En effet, *"Teaching a foreign language, therefore, is an act of teaching and developing the reading, speaking, writing and listening skills of students as well as introducing the culture of the society within which the target language is spoken so that our students can understand what language actually means, instead of what it tells"* [2, p.42].

Dans le cadre de la licence de français, la littérature est potentiellement présente dans les canevas de licence. La formation de trois ans n'est pas spécialisée et offre ainsi à l'apprenant une panoplie de modules l'initiant aux trois spécialités présentes en master à l'université de Blida 2 à savoir: didactique du fle, littérature générale et comparée et sciences du langage.

Dans la présente recherche, je présenterai une intervention pédagogique menée auprès de mes étudiants de deuxième année de licence de français dans le cadre du module de compréhension/production écrites. Ce projet de recherche est né d'une initiative personnelle suite à l'analyse des discours de mes étudiants sur la littérature. En effet, leurs représentations défavorables vis-à-vis des modules littéraires ainsi que leurs difficultés en production écrite m'ont poussée à entreprendre ce travail dans l'intention de les aider à dépasser ces préjugés, les concilier avec le texte littéraire et surtout améliorer leurs compétences en production écrites. De fait, mon dispositif visait à aider mes étudiants à s'amender en production écrite tout en lisant des nouvelles littéraires sélectionnées sur le volet dans l'espoir de les intéresser et de stimuler à la fois leur envie de lire et d'écrire.

Mon article est structuré en deux grandes parties. La première est dédiée au cadre conceptuel et définit les différents axes théoriques sur lesquels repose mon étude. La seconde partie est consacrée à la description de la démarche expérimentale et la mise en œuvre de mon action remédiateur ainsi que les résultats qui en découlent.

2. Cadrage théorique

2.1. La nouvelle: définition et caractéristiques

La nouvelle est un genre littéraire. Il s'agit d'une histoire courte avec une seule intrigue, un ou des personnages, un cadre spatio-temporel, etc. Elle peut être historique, fantastique, policière, allégorique, moderniste, postmoderniste, etc. C'est une œuvre de fiction qui est généralement écrite en prose, souvent sous forme narrative et axée sur un seul événement. Edgar Allan Poe la définit comme *"a narrative that can be read at one sitting of from one-half hour to two hours, and that is limited to 'a certain unique or single effect,' to which every detail is subordinate"* [3].

La nouvelle répond à une forme narrative particulière et a des caractéristiques propres à elle. Ce type littéraire se caractérise par la brièveté, l'unité et la simplicité. Les personnages et les lieux sont réduits et les dialogues sont rares. La description des personnages et des

décors est moins élaborée que dans le roman. En outre, le style est plus simple et l'intrigue repose essentiellement sur l'évolution psychologique du personnage central.

La structure de la nouvelle littéraire répond au schéma narratif et son écriture respecte ses étapes en incluant une situation initiale, un élément déclencheur, des péripéties, un dénouement et enfin une situation finale.

Ma recherche s'intéresse à une seule forme de nouvelle: la nouvelle à chute. Il s'agit d'une nouvelle qui se termine par un événement inattendu ou imprévisible qui suscite l'étonnement du lecteur et l'incite à réfléchir sur ce qu'il vient de lire. Elle est appelée à *chute* puisque le dénouement constitue un point fort dans la narration, un élément qui déstabilise le lecteur. En général, la chute est la dernière phrase de la nouvelle (la clausule). Elle vise à produire une réaction chez le lecteur, un effet-surprise qui va le pousser à relire le texte afin de retrouver des indices qui pouvaient l'aider à anticiper la chute ou, dans le cas des étudiants, les interpeler et les exhorter à la réflexion par le biais de la relecture-repérage d'indices.

2.2. La nouvelle littéraire en classe de fle

Le texte littéraire constitue un outil pédagogique riche et précieux pour l'enseignement/apprentissage de la langue cible. En effet, "*Le texte littéraire est un laboratoire langagier, où la langue est si instamment sollicitée et travaillée, que c'est en lui qu'elle révèle et exhibe le plus précisément ses structures et ses fonctionnements. Littérature, non pas, non plus, comme « supplément culturel », « mais assise fondatrice de l'enseignement de la langue »*" [4, p.145].

Exploiter la nouvelle en classe de langue incarne plusieurs avantages. Premièrement, la nouvelle est un texte court comportant généralement une seule intrigue, peu de personnages et les passages descriptifs sont restreints. De la sorte, il est facile pour les apprenants de suivre le fil de l'histoire. Deuxièmement, les textes courts peuvent encourager les apprenants à la lecture et développer par conséquent leur désir de lire. Enfin, la nouvelle peut servir de support pour différentes activités en classe surtout la production écrite. En effet, sa lecture peut servir de lanceur d'écriture.

2.3. Qu'est-ce qu'écrire ?

Depuis l'apparition des premières méthodes d'enseignement/apprentissage de langues étrangères, l'écrit a toujours eu une place prioritaire. Par exemple, dans la méthodologie traditionnelle, connaître une langue signifiait maîtriser le passage, exclusivement à l'écrit, de la langue maternelle à la langue cible en traduisant des textes littéraires. Dès lors, l'écrit a toujours été considéré comme l'unique vecteur du savoir, il a joui pendant des siècles d'un statut privilégié.

Deschênes [5, p.77] définit l'écriture comme une "*activité cognitivo-motrice relativement complexe dont le but est l'énoncé d'un message avec une intention précise, à l'aide d'une forme particulière du langage*". Ecrire est donc un processus de génération, d'élaboration, de transformation d'idées; c'est une activité intellectuelle réalisée par un scripteur pour exprimer une pensée, transmettre un message grâce à un code et des normes d'écriture. En ce sens, produire des textes écrits constitue une opération cognitive complexe qui requiert une multitude de savoirs et savoir-faire linguistiques, métalinguistiques, textuels et métatextuels "*une activité mentale, complexe de constructions de connaissances et de sens*" [6, p.180]. Ce qui signifie que la production de texte écrits exige des connaissances microstructurales

(morphosyntaxe, lexicque et sémantique), et macrostructurales (cohérence et organisation textuelle).

Elle est complexe dans la mesure où le scripteur doit combiner des éléments linguistiques et métalinguistiques, cognitifs et métacognitifs, psychoaffectifs et représentationnels. Reuter regroupe ces éléments dans une définition de l'activité scripturale assez entière : *"une pratique sociale, historiquement construite, impliquant la mise en œuvre, tendanciellement conflictuelle, de savoirs, de représentations, de valeurs d'investissement et d'opérations, par laquelle un ou plusieurs sujets visent à produire du sens linguistiquement structuré à l'aide d'un outil, sur un support, dans un espace socio-institutionnel donné"*. [7-p.58]

En raison de la complexité de l'acte d'écrire, son apprentissage nécessite de longues années et se prolonge même après la scolarité. En outre, son processus acquisitionnel exige la mise en place de multiples modes d'expression écrite *"Pour apprendre à écrire il faut écrire, s'entraîner à écrire, régulièrement sur des sujets qui concernent celui qui écrit. L'écriture s'apprend en exerçant (...), tout le monde peut écrire si on lui en donne le temps, les moyens, les outils"* [8, p.23].

A ce titre, l'écriture au sein des ateliers d'écriture représente un bon exercice et un mode d'apprentissage de l'écrit susceptible de favoriser l'expression et d'aider les apprenants à dépasser leurs phobies.

2.4. Ateliers d'écriture: définition, objectifs et fonctionnement

Un atelier d'écriture est un lieu où l'on pratique l'écrit individuellement ou collectivement et on encourage la créativité des apprenants. Autrement dit, c'est un lieu où un groupe d'apprenants guidé par un animateur (l'enseignant) se réunit pour produire des textes avec plaisir. Amador [9] avance la définition suivante: *"l'atelier d'écriture est la réunion de personnes qui écrivent des textes à partir d'une consigne donnée par un animateur. (...) Le but est de libérer l'écriture des participants"*.

Voltz [10, p. 47], pour sa part, insiste dans sa définition sur le rôle des interactions au sein des ateliers d'écriture *"[les ateliers d'écritures sont] des lieux et des moments où l'on se réunit à plusieurs, où l'on écrit : parfois seul, parfois en groupe, de toutes façons toujours on y lit ce qu'on a produit, le groupe renvoie des échos, des questions, permet d'approfondir, de réécrire, d'améliorer"*.

Dans cette optique, l'atelier d'écriture renferme plusieurs objectifs. D'abord, c'est un espace de partage et de discussion où tous les besoins des apprenants sont librement exprimés (lacunes, incompréhensions, hésitations, blocages, pensées et représentations négatives, doutes, etc.), pour stimuler l'écriture et créer des idées. Ensuite, il permet de créer un climat de confiance pour motiver les participants et renforcer leur relation. En outre, il aide à développer les compétences linguistiques, textuelles et métatextuelles des apprenants. Enfin, écrire à plusieurs permet à l'élève de réfléchir sur ses propres compétences, comprendre ses difficultés et développer par conséquent sa métacognition : *"l'atelier d'écriture est un espace-temps institutionnel dans lequel un groupe d'individus, sous la conduite d'un " expert " produit des textes, en réfléchissant sur les pratiques et les théories qui organisent cette production, afin de développer les compétences scripturales et méta-scripturales de chacun de ses membres"* [7, p. 35].

Reuter, en se référant aux fondateurs de l'atelier d'écriture, souligne deux orientations. La première initiée par Elizabeth Bing, axée sur le " pôle psychique", tandis que la seconde est celle de Ricardou & Oriol-Boyer qui est centrée sur le " pôle textuel ". La présente étude

s'inscrit dans le second courant. Ce choix est motivé par le substrat théorique de cette approche du texte (la textique). D'une part, les auteurs insistent sur la dyade lecture/écriture en prônant le rôle de la lecture dans l'amélioration de la compétence scripturale. D'autre part, l'atelier d'écriture met en avant le rôle de la réécriture. En effet, Oriol-Boyer [11] conçoit l'écriture comme un ensemble de lecture-relecture-réécriture. En bref, la lecture prépare l'écriture et la réécriture améliore la production textuelle.

2.5. Fonctionnement des ateliers d'écriture

L'atelier d'écriture est un bon outil pédagogique ayant pour but d'offrir aux apprenants un moment de partage et de collaboration en écriture sans pour autant se soucier des failles et lacunes de chacun dans la mesure où ces ateliers incitent à l'acceptation et au respect de l'autre et de son texte. En outre, le travail de réécriture constitue une expérience enrichissante.

L'atelier d'écriture se déroule en plusieurs phases. Premièrement, la lecture d'un texte littéraire d'appui (Oriol-Boyer) *"C'est la lecture ascendante de ce texte d'appui, en quête de cohérence, qui doit permettre de dégager son opération d'écriture majeure, à savoir un fait de langue permettant un effet de sens qui n'est autre le projet d'écriture"* [12, p. 84]. Ensuite, l'enseignant-animateur donne la consigne avec une pléthore de détails: *"Les consignes, dans un atelier d'écriture sont plus des 'guides' d'écriture que des 'mots d'ordre'. Par leur laconisme, elles libèrent l'imaginaire et obligent à prendre position (...) elles entraînent les écrivains sur les chemins de l'inhabituel, de l'inconnu"* [13, p. 53]. Après, les apprenants écrivent leurs premiers jets en se basant sur le texte d'appui : *"L'expression écrite s'appuie sur une grande source d'éléments langagiers qu'on trouvera surtout par la lecture. De nombreuses lectures et des écoutes de textes plus fines avec une transposition de leurs contenus à l'écrit permettent d'amener les apprenants à améliorer graduellement leur production"* [14, p. 46]. Ensuite, les textes produits (premier jet) sont lus et discutés entre les apprenants ; ce retour est un moment de partage et d'écoute instructif. Puis, la réécriture à plusieurs ou seul suivie d'une mise en commun et de pause métacognitive.

Tout au long du processus de génération de texte, l'enseignant joue le rôle de médiateur en écoutant les différentes propositions de ses apprenants, en expliquant, échangeant, interagissant et les encourageant pour les aider à mieux rédiger leurs textes.

Au sein d'atelier d'écriture, l'apprenant-scripteur développe ses compétences de lecture-écriture et participe ainsi à la construction de son propre apprentissage en dépassant sa peur de l'erreur et en intériorisant le fait que le texte parfait n'existe pas: *"Un atelier d'écriture s'apparente à un travail à la fois individuel et collectif, qui favorise la créativité mais aussi le partage et l'échange. Chaque élève y découvre et il y pratique sa propre écriture qu'il doit nécessairement confronter à celle des autres, ce qui constitue une réelle source d'enrichissement personnel"* [15, p. 12].

Après avoir exposé les soubassements théoriques sous-tendant ma recherche, je vais passer à présent à la partie pratique. Je commencerai avec mes choix méthodologiques dans l'ordre suivant: j'expliquerai les motifs de cette recherche, ensuite je décrirai mon public et préciserai mes objectifs. Puis, je présenterai mon dispositif de remédiation, le déroulement de l'expérimentation que j'ai mise au point et je finirai avec l'analyse des données recueillies.

3. Méthodologie

L'idée de ce travail a été initiée par un double constat. Le premier est la qualité insatisfaisante des textes produits par mes étudiants de deuxième année de licence de

français en cours de compréhension-production écrites, et le second étant le rapport négatif exprimé par ces derniers vis-à-vis des corpus étudiés dans les modules littéraires. Ainsi, pour amorcer ma recherche, j'ai effectué une pré-enquête auprès de mes étudiants par le biais d'un questionnaire écrit anonyme pour connaître leurs positions vis-à-vis des textes littéraires étudiés en classe (Cf. annexe1). Il en ressortait que les étudiants affichaient des postures défavorables dues principalement aux thèmes et auteurs étudiés en cours de littérature que les étudiants trouvent dépassés, inintéressants et en déphasage avec leur époque et centres d'intérêts. De plus, le style d'écriture est difficile et les textes à lire sont trop longs; ce qui freine le zèle des apprenants.

Cet état de fait m'a poussée à formuler les questions suivantes : quels seraient les effets d'un atelier d'écriture sur le développement scriptural et cognitif des étudiants ? L'atelier d'écriture permettrait-il de développer le plaisir de lire et d'écrire chez ces apprenants ? Quel impact aurait l'emploi de la nouvelle littéraire dans l'amélioration des productions écrites des étudiants et dans l'objectivation des représentations exprimées préalablement sur la littérature ?

Après mon enquête préliminaire, ma recherche s'est déroulée selon deux modalités : d'une part, j'ai animé des ateliers d'écriture dont la démarche sera décrite dans les lignes qui suivent et d'autre part, après trois mois de pratique, j'ai effectué des entretiens collectifs sous forme de focus group avec les apprenants afin d'évaluer les effets de la pratique d'ateliers d'écriture sur le progrès de leurs habiletés rédactionnelles ; et dans la foulée, réexaminer leurs représentations de la littérature. J'ai choisi les entretiens de groupe pour encourager le partage d'expériences (Cf. annexe 2).

Mon action remédiatrice s'inspire des travaux d'Oriol-Boyer [11] et repose sur trois assises de l'acte d'écrire en atelier à savoir lire-écrire-réécrire. Mon échantillon est composé d'une classe de 36 étudiants inscrits en deuxième année de licence au département de français de l'université de Blida 2: 34 filles et 2 garçons dont l'âge varie de 18 à 25 ans.

Mon projet d'écriture poursuit plusieurs objectifs:

- Créer un espace de collaboration entre ces étudiants où ils redécouvriront un genre littéraire qui pourrait les motiver à positiver leur rapport au texte littéraire ; un espace où ils sont invités à co-construire des textes, se co-corriger, co-réfléchir et écrire ensemble pour dépasser leurs peurs et blocages en fle.

- Développer leurs habiletés scripturales en améliorant leurs compétences linguistiques, métalinguistiques, textuelles et métatextuelles grâce à la lecture de plusieurs nouvelles littéraires.

- Entraîner les étudiants à l'écriture citrique en leur donnant accès à un mode d'écriture nouveau dans une situation de communication interactive.

- Amener les étudiants à positiver leurs représentations de la littérature et leur redonner goût à la lecture littéraire.

- Mesurer les effets qu'entraîne l'intégration de la pratique des ateliers d'écriture dans une classe de fle à l'université sur la compétence scripturale des participants.

3.1. Déroulement de l'expérimentation

De février à avril 2023, j'ai pratiqué des ateliers d'écriture avec la même classe de 2^{ème} année. Pour ce faire, j'ai sélectionné des nouvelles d'une page pour commencer l'expérimentation ; la longueur et la complexité augmentaient au fur et à mesure.

Mon choix de la nouvelle est motivé par ma volonté de travailler des textes courts avec une seule intrigue, peu de personnages et dans la plupart des cas sans passages descriptifs. De la sorte, il est facile pour les apprenants de suivre le fil de l'histoire. Deuxièmement, les textes courts pourraient motiver les apprenants et les amener à apprécier la lecture de textes littéraires. J'ai veillé aussi à choisir des textes écrits dans une langue accessible aux apprenants. Enfin, la nouvelle me sert à travailler différentes activités : compréhension écrite, production écrite et orale, activités de vocabulaire et de grammaire. Voici les titres des nouvelles littéraires travaillées en classe avec les étudiants :

1. *Le reflet* de Didier Daeninckx.
2. *Une méchante petite fille* de Jehanne Jean-Charles.
3. *Cauchemar en jaune* de Fredric Brown.
4. *Quand Angèle fut seule* de Pascal Mérigeau .
5. *Lucien* de Claude Bourgeyx.
6. *Cauchemar en gris* de Fredric Brown.
7. *Happy meal* d'Anna Gavalda.
8. *Le K* de Dino Buzzati.
9. *La parure* de Guy de Maupassant.
10. *Continuité des parcs* de Julio Cortazar.

Chaque cours se répartissait en six phases :

1. Lecture du texte littéraire d'appui.
2. Consigne d'écriture.
3. Écriture collective.
4. Lecture des textes produits et débat.
5. Réécriture individuelle.
6. Evaluation et remise du texte final aux apprenants.

Mon projet pédagogique avait pris forme à partir du début du second semestre, date à laquelle j'entamais les cours de compte rendu objectif ensuite critique. J'avais pour ainsi dire, décidé d'inscrire le dispositif dans la continuité du programme du module. Donc, le cadre théorique renfermait plusieurs cours : le compte-rendu objectif et le compte rendu critique, la reformulation, les connecteurs logiques, la cohérence textuelle, les verbes de parole et enfin la conjugaison des verbes des trois groupes au présent de l'indicatif.

Au début de l'expérimentation, les étudiants étaient répartis en groupes de 4, au total, 9 groupes se sont formés. Les séances commençaient avec la lecture d'une nouvelle suivie de questions de compréhension et d'explication de la chute. Ainsi, la consigne se divisait en deux parties. La première était une batterie de questions relative à la compréhension de la nouvelle, tandis que la seconde visait la production collective du compte-rendu de la nouvelle lue.

Lors des premières séances, je demandais aux étudiants d'écrire le compte-rendu objectif, ensuite, la consigne était de produire un compte-rendu critique dans lequel le lecteur-scripteur donne son point de vue en argumentant. Si le premier jet se réalisait en collaboration avec les participants du même groupe, le texte final après correction se faisait individuellement. Il est à noter que le passage de l'écrit collectif à l'écrit individuel était une démarche sous-tendue par l'objectif de permettre à l'étudiant d'une part de développer sa capacité à relire le texte écrit pour le réécrire, le "*corriger, réviser, reprendre, transformer, transposer, retoucher, réduire, développer, améliorer* ; *c'est encore peiner, besogner, mettre en*

question ; c'est toujours relire" [16, p. 198]. Et d'autre part, de mettre en avant sa propre opinion sur le texte lu pour lui donner un caractère personnel.

A la fin de chaque séance, je ramassais les textes produits pour les corriger à la maison et les remettre aux apprenants la séance suivante. L'évaluation nous permettait de noter les progrès des étudiants sur les deux niveaux macrostructural et microstructural.

Je tiens à préciser, par ailleurs, que les étudiants avaient des ressources à leur disposition lors de la production écrite, telles que les photocopies de cours, les dictionnaires et les téléphones pour accéder à internet.

Passons maintenant aux principaux résultats de mon expérimentation. La lecture des données recueillies se fera en deux moments. Je rapporterai dans un premier temps les effets de la pratique d'ateliers d'écriture sur la compétence scripturale de mes étudiants avant d'exposer leurs discours sur cette expérience.

4. Résultats et discussion

4.1. Effets des ateliers d'écriture à partir des nouvelles littéraires sur les textes des étudiants

Je présenterai les résultats de mon action expérimentale en mettant en avant les critères à la fois linguistiques, métalinguistiques, textuels et métatextuels marquant l'évolution des textes produits par les apprenants. Le premier critère concerne l'amélioration sur le plan linguistique et métalinguistique enregistrée à l'issue de cette intervention didactique. Le second est relatif au respect des caractéristiques des textes à produire à savoir le compte-rendu objectif et le compte-rendu critique.

Voici les principaux résultats :

- Des erreurs de surface étaient encore présentes dans les productions finales (grammaire, conjugaison, orthographe et lexique).
- La compétence lexicale s'est légèrement améliorée car j'ai remarqué le réinvestissement de quelques nouveaux mots présents dans les nouvelles.
- Les consignes d'écriture étaient respectées. Toutefois, j'ai relevé dans les textes des étudiants la présence de plusieurs éléments du texte d'origine. Ainsi, la reformulation pose toujours problème aux étudiants et constitue une tâche ardue.
- Le temps de lecture-compréhension s'est réduit. Aussi, la compréhension des chutes s'est améliorée ; les interventions de l'animatrice à ce niveau étaient moindres.
- La structure du texte à écrire était de plus en plus respectée. De fait, les étudiants prêtaient attention aux spécificités du texte à produire et respectaient sa structure et ses caractéristiques.
- La ponctuation dans les comptes-rendus s'est améliorée et les étudiants employaient de plus en plus de connecteurs logiques pour assurer la cohérence de leurs textes.
- Une diminution du style informel a été observée dans les écrits.
- Les étudiants ont appris à planifier leurs comptes-rendus avant d'entamer la rédaction et à diversifier les verbes de parole. J'ai noté également une amélioration dans la conjugaison des verbes au présent de l'indicatif.
- Au sein des ateliers, les apprenants parlaient librement de leurs erreurs car ils avaient compris que leurs camarades souffraient des mêmes difficultés et blocages qu'eux. On peut dire que l'erreur a été dédramatisée aux yeux de ces étudiants.

- Débattre pour avoir plusieurs regards sur le texte a permis aux apprenants de mieux recevoir les critiques et le regard de l'autre sur leurs textes.
- Ces ateliers d'écriture ont permis aux apprenants de dévoiler des aspects de leur personnalité et de leur vécu grâce aux critiques des nouvelles.
- Les étudiants ont pris conscience de l'obligation d'argumenter leur point de vue de façon scientifique en avançant des arguments fondés et dûment documentés.
- L'esprit critique constructif et objectif des étudiants se développait en se fondant sur des références bibliographiques.
- Le travail groupal a créé une atmosphère favorable à la pratique de l'écriture.
- Les participants s'impliquaient de plus en plus dans les ateliers. Par exemple, après la lecture de la nouvelle du jour, ils n'hésitaient pas à la comparer aux autres : « madame, je préfère celle de la semaine dernière ». En outre, certains auteurs trouvaient plus de succès que d'autres « madame, on veut plus de Buzzati ».
- Le travail de réécriture a sensibilisé les étudiants à la nécessité de relire-corriger le premier jet ; ceci était de plus en plus visible dans leurs copies et ce surtout d'un point de vue textuel. Au début, la réécriture se limitait à des corrections superficielles mais au fur et à mesure elle s'orientait vers la structure textuelle et la cohérence de l'ensemble.
- L'échange entre les membres des ateliers d'écriture a permis aussi de les motiver, et de les aider à améliorer leurs compétences rédactionnelles en général.

En somme, l'intégration de l'atelier d'écriture dans les séances de compréhension-production écrites a apporté un nouveau souffle à la pratique de l'écriture et a contribué à l'instauration d'un chantier d'écriture-réécriture interactives soutenue par des consignes claires pour le déclenchement du processus de génération textuelle.

Par ailleurs, ces ateliers d'écriture ont donné la possibilité aux apprenants d'expérimenter un nouveau mode d'écriture polyphonique inédit et fructueux. D'ailleurs, leurs propos en témoignent. Ce disant, intéressons-nous, à présent, au retour d'expérience. Rappelons que celui-ci m'a permis par la même occasion de vérifier si leur discours sur la littérature avait évolué.

4.2. Analyse des réponses des étudiants à l'entretien mené après l'expérimentation

Les questions de l'entretien étaient principalement axées sur les effets de l'atelier d'écriture et parallèlement quelques questions sur les représentations de la littérature ont été posées pour voir si les représentations défavorables exprimées au début de l'expérimentation avaient été modifiées.

Concernant les ateliers d'écriture, les avis recueillis étaient positifs et encourageants : "j'ai vraiment aimé l'expérience ", " L'écriture au sein des ateliers donne une vision différente et un nouveau désir pour l'écriture ", " j'ai compris que mes camarades avaient les mêmes blocages et les mêmes lacunes que moi ça m'a grave décomplexé ", "j'ai aimé écrire en groupe et avec la documentation à disposition ça m'a poussé à réfléchir sur ma façon de faire par exemple j'ai remarqué que Lina divisait le texte en paragraphes, donnait un titre à chacun, puis elle recopie l'idée générale pour la reformuler. Je trouve sa méthode intéressante".

Dans l'ensemble, les étudiants étaient satisfaits de l'expérience mais évidemment quelques avis étaient mitigés. Les raisons avancées sont d'ordre affectif et représentationnel " Bof ! C'était bien mais je déteste les textes littéraires ", "ne le prenez pas pour vous madame mais moi la littérature, c'est mort !", " quelques nouvelles ça va mais les romans, jamais !"

Une réponse était liée au paradigme pragmatique : "à quoi ça sert de lire des nouvelles ou autres ? On sera enseignants, il faut de la didactique, apprendre à enseigner".

Par ailleurs, les étudiants sondés considèrent que la pratique régulière des ateliers d'écriture les a aidés à dépasser leur insécurité linguistique. 92% des participants ont apprécié l'atmosphère de jovialité installée en classe lors de ces ateliers d'écriture qui a rendu l'espace-classe plus animé et plus souple. Tandis que 92% ont préféré le moment de partage et l'écriture affranchie de l'aspect métalinguistique qui a permis au poids de l'erreur de diminuer "j'ai aimé écrire collectivement un texte avec mes camarades", "je n'avais pas peur de faire des fautes, pour une fois !!!" Certains (63%) ont insisté sur le rôle de la lecture-réécriture du premier jet, ils estiment que lire son texte pour l'améliorer sans en être jugé était bénéfique "j'ai compris l'importance de la réécriture", "je n'avais pas l'habitude de relire mon texte plusieurs fois et de faire plusieurs changements". Apparemment, cette expérience a permis aux participants de prendre conscience des bienfaits de la réécriture -toiletage du texte initial.

Seulement, ce n'est pas le cas de la littérature qui n'a pas trouvé grâce aux yeux des étudiants et même après la lecture de plusieurs nouvelles littéraires, l'intérêt porté à la littérature chez cette population demeure faible. En revanche, leur adhésion aux intérêts pédagogiques de la littérature reste élevée "je sais que lire des textes littéraires améliore mon niveau", "la littérature est importante pour le niveau mais j'aime pas !" Toutefois, d'après les discours des participants, le genre représente un facteur d'influence important dans le rapport à la littérature en fle "si je dois lire des nouvelles courtes, super courtes, pas de problème", "lire ! Un truc court, très court genre Lucien, une demie page pas plus et une fois par semaine pas plus !", "Ça dépend, les romans anciens, les classiques, j'aime pas, je préfère les bandes dessinées."

De la sorte, des représentations favorables aux nouvelles littéraires lues en classe ont été enregistrées chez la majorité des étudiantes "oui, sincèrement madame, c'était intéressant", "j'avoue qu'au départ, ça ne m'a pas branché mais après j'ai aimé les nouvelles surtout Buzzati", "j'ai kiffé Buzzati et la méchante petite fille."

Après l'analyse des propos des interviewés, je peux affirmer que cette action pédagogique a eu des retombées positives sur la compétence scripturale de mes étudiants. Il est à déplorer que le rapport à la littérature n'ait pas changé. Même si la nouvelle littéraire a bénéficié d'un infléchissement représentationnel, la littérature se trouve complètement rejetée (98%). Ce rejet pourrait être interprété comme un indicateur de blocage à cause de la difficulté ou des genres de textes proposés aux étudiants ou peut-être que ces représentations trouvent leur source dans des expériences personnelles ou dans d'autres éléments tels que les pratiques enseignantes, le milieu socioculturel, les médias, les ambitions personnelles, etc.

Les implications didactiques qui découlent de ces réponses seraient liées à la réflexion au choix des corpus à travailler avec les apprenants pour essayer d'atténuer ce désintéressement. Je pense qu'il est primordial de proposer des lectures répondant aux centres d'intérêt des étudiants et ceci ne peut se faire sans un dialogue entre enseignants et apprenants, par exemple proposer des bandes dessinées ou sélectionner attentivement des extraits de romans qui pourraient motiver les étudiants à lire la totalité du texte.

Enfin, mon intervention visait à déterminer la contribution des ateliers d'écriture au développement de la compétence scripturale par le biais des nouvelles littéraires. Aussi, j'ai

essayé d'ancrer l'acte d'écriture dans une dimension interactive afin de fournir le moyen à mes étudiants de communiquer entre eux et de partager leurs points de vue.

Compte-tenu de l'analyse des données expérimentales, je pourrai affirmer que le travail en atelier est plus rentable que le travail individuel ; les textes de mes étudiants produits collectivement sont plus riches en lexique, conjugaison, orthographe, etc. De plus, les énoncés sont mieux structurés et plus cohérents.

Tout bien considéré, cette intervention didactique était bénéfique pour mes étudiants et pour moi aussi. En effet, l'animation d'ateliers d'écriture s'est révélé une tâche instructive et fructueuse qui m'a permis d'apprendre au même temps que mes étudiants, de me rapprocher d'eux, les écouter, partager des lectures avec eux et surtout les aider à s'amender en production écrite.

Conclusion

Dans la présente recherche, je me suis attachée à démontrer l'impact des ateliers d'écriture sur le développement des compétences scripturales chez les étudiants de deuxième année de licence de français à l'université de Blida 2 grâce à la lecture de nouvelles littéraires.

L'atelier d'écriture s'avère un moyen efficace pour dynamiser les cours de production écrite et les affranchir du contexte scolaire contraignant qui les caractérise. Les ateliers d'écriture m'ont permis de réaliser une double action pédagogique : améliorer la compétence lectorale et la compétence scripturale de mes étudiants. Cette perspective offre la possibilité d'envisager l'articulation lecture-écriture de façon attrayante et plus motivante d'où la nécessité de former les enseignants à la pratique de l'atelier d'écriture en explicitant les bien-fondés pédagogiques de cette pratique.

Enfin, enseigner l'écriture amène à s'interroger continuellement sur ses modes d'enseignement afin de (re)trouver la voie vers la motivation des apprenants et la libération de l'expression. L'écriture au sein d'un atelier encourage l'échange interactif et instaure une atmosphère favorable à la génération textuelle qui permet de tendre la main aux apprenants ayant des difficultés à écrire en fle.

Les résultats générés par cette étude montrent encore une fois le rôle du texte littéraire dans l'appropriation des techniques rédactionnelles et le développement des compétences en fle. La nouvelle littéraire s'est révélé un outil pédagogique efficace à exploiter en classe de langue pour aider les apprenants à s'amender en langue cible.

Conflicts of Interest: The author declares no conflict of interest.

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Citation: Makhlouf, L. Writing workshops in french foreign language at the Algerian University. *Journal of Social Sciences*. 2023, 6 (3), pp. 114-125. [https://doi.org/10.52326/jss.utm.2023.6\(3\).09](https://doi.org/10.52326/jss.utm.2023.6(3).09).

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Submission of manuscripts:

jes@meridian.utm.md

[https://doi.org/10.52326/jss.utm.2023.6\(3\).10](https://doi.org/10.52326/jss.utm.2023.6(3).10)
UDC 378.147:004.7



OPTIMIZING COMPUTER NETWORK LEARNING THROUGH SEQUENTIAL E-LEARNING BASED ON DIGITAL TECHNOLOGY

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Received: 07. 10. 2023

Accepted: 08. 15. 2023

Abstract. Practical experiences applied in the design of modules for the Computer Networks (CN) course unit are described, taking into account the main elements in this process, the specifics of teamwork, the structure and content of the 27 recorded modules/lessons (17 video lessons for teaching the theoretical content and 10 lessons for practical laboratory content), forms of teaching material representation and applied Information and Communication Technology (ICT) tools. The concept of multiple step learning (MLS) is a way to create eLearning courses that reflect the knowledge up to the course or topic to be discussed. The RC course unit is described as innovative with eLearning, content presented at different levels of complexity and each next stage explaining the topic in more detail than the previous content (interdisciplinary connections for better understanding). Based on student feedback, the MLS RC for the 2022/2023 study year has been supplemented with 2 methodical guidelines for carrying out practical and laboratory work (the first guideline medium level of complexity, guideline 2 high level of complexity – laboratory instructions explained step by step).

Keywords: *eEducation, eLearning strategies, MLS course, test, methodical guidance, open courses, evaluation, horizontal correlation.*

Rezumat: În lucrare se descriu experiențe practice aplicate în proiectarea modulelor pentru unitatea de curs Rețele de Calculatoare (RC), luând în considerare elementele principale din acest proces, specificul lucrului în echipă, structura și conținutul celor 27 module/lecții înregistrate (17 lecții video pentru predarea conținutului teoretic și 10 lecții pentru conținutul practic de laborator), formele de prezentare a materialului didactic și instrumentele Tehnologiei Informaționale și de Comunicare (TIC) aplicate. Conceptul de învățare în mai multe etape (MLS) implică crearea de cursuri eLearning care dezvoltă cunoștințele treptat, pornind de la cele de bază și avansând către subiecte mai complexe. Se descrie unitatea de curs RC ca inovat cu eLearning, conținut prezentat pe nivele diferite de complexitate și fiecare următoarea etapă ce explică subiectul în detalii mai multe decât în conținutul anterior

(conexiuni interdisciplinare pentru o mai bună înțelegere). În baza feedback de la studenți, MLS RC pentru anul de studiu 2022/2023 a fost completat cu 2 îndrumare metodice pentru realizarea lucrărilor practice și de laborator (primul îndrumar nivel mediu de complexitate, îndrumar 2 nivel de complexitate ridicat – instrucțiuni de laborator explicate pas cu pas).

Cuvinte-cheie: *eEducație, strategii eLearning, MLS curs, etest, îndrumar metodic, cursuri deschise, evaluare, corelare pe orizontală.*

1. Introducere

Conform cercetărilor, majoritatea universităților implementează în mod activ eLearning [1]. Într-un sens restrâns, eLearning reprezintă o formă evoluată de educație, organizată ca o experiență planificată de predare-învățare, gestionată de o instituție care furnizează materiale de învățare într-o secvență logică și ordonată. Curriculum care se livrează prin intermediul noilor tehnologii trebuie să fie revizuit din perspectivă pedagogică, ținând cont de contextul în care are loc procesul de învățare și de o serie de factori care influențează educația. Pentru studenți, nu doar cunoștințele în sine sunt importante, ci și abilitatea de a căuta informații și de a le interpreta. Pentru a implementa un curriculum bazat pe obiective de învățare în eLearning, este crucial să se ofere cursuri de dezvoltare profesională pentru profesorii universitari, axate pe pedagogie și proiectarea hărților curriculare, pentru a-i ajuta să adapteze strategiile de predare și evaluare la mediul online și să utilizeze eficient tehnologiile educaționale [2-3].

Pentru unitatea de curs rețele de calculatoare, corelarea pe orizontală semnifică corelarea constructivă a finalităților de studii, a strategiilor de predare și învățare și a celor de evaluare la nivel de cursuri anterioare. Acest model se bazează pe:

- **Ce finalități de studii trebuie să realizeze studenții în cadrul unității de curs rețele de calculatoare?** Aceasta poate include înțelegerea principiilor și conceptelor fundamentale ale rețelelor de calculatoare, dobândirea abilităților de proiectare și configurare a rețelelor, precum și dezvoltarea competențelor de rezolvare a problemelor și de gestionare a rețelelor.
- **Ce strategii și metode de predare vor fi folosite pentru a ajuta studenții să atingă aceste rezultate?** Profesorul utilizează diverse strategii și metode, cum ar fi prelegerea interactivă, studii de caz, lucrări practice în laborator, simulări, exerciții de rezolvare a problemelor și proiecte de cercetare. Acestea implică, de asemenea, utilizarea de resurse digitale și tehnologii specifice rețelelor de calculatoare.
- **Ce sarcini și criterii de evaluare vor demonstra că studenții au atins rezultatele?** Profesorul stabilește sarcini și activități de evaluare care să demonstreze înțelegerea și aplicarea conceptelor de rețele de calculatoare, cum ar fi teste scrise, examene practice de configurare a rețelelor, proiecte de implementare a unei rețele și prezentări orale.

Prin aplicarea corelării pe orizontală la unitatea de curs universitar, se asigură că finalitățile de studii sunt clar definite, strategiile și metodele de predare sunt adaptate pentru a atinge acele finalități, iar evaluarea este realizată în concordanță cu criteriile prestabilite. Aceasta optimizează învățarea studenților și susține un nivel înalt de performanță și implicare în procesul de învățare pentru domeniul rețelelor de calculatoare.

Se descriu caracteristici ale conținuturilor instrucționale de tip eLearning din prisma implementărilor pentru unitatea de curs Rețele de Calculatoare (RC), care se regăsește în planul de studii la mai multe programe de licență a Facultății Calculatoare Informatică și

Microelectronică precum și Facultatea Electronică și Telecomunicații, pentru învățământ la zi sau fără frecvență, pe ani de studii repartizat diferit. Cursul se concentrează de la explicarea principiilor rețelelor la nivel mediu până la administrarea și securitatea în rețea, nivel avansat.

În prezent, observăm o creștere semnificativă în utilizarea metodelor de eLearning pentru învățământul superior, iar această evoluție influențează în mod considerabil caracterul procesului de învățare. Profesorul avea un rol central în asumarea responsabilității pentru învățare și rezultatele studenților. În contextul actual, învățământul superior acordă o atenție semnificativă lucrului individual al studenților prin ghidarea oferită de profesori. Această paradigmă se concentrează pe acumularea individuală de cunoștințe și pregătirea pentru integrarea ulterioară pe piața muncii, cu un accent deosebit pe dezvoltarea competențelor esențiale care permit studenților să-și continue procesul de învățare pe tot parcursul vieții.

Din perspectiva inginerilor și a științei calculatoarelor, rețelele de calculatoare sunt un subiect interdisciplinar cu subiecte individuale dar și o gamă largă de interese. Potrivit [4, pp. 80-104] tehnologiile atrag studenții către procesul educațional și desigur Tehnologia Informației și Comunicație (TIC) ajută individualizarea educației.

Cu toate că termenii "Tehnologia Informației și Comunicațiilor" (TIC) și "învățare mediat electronică" (eLearning) sunt acum larg răspândiți și recunoscuți, elaborarea unui curs eLearning de înaltă calitate rămâne o provocare complexă, datorită variației semnificative în ceea ce privește disponibilitatea resurselor de informații și diversității calității procesului de învățare [5].

Metoda de învățare secvențială (MLS) reprezintă o abordare utilizată pentru dezvoltarea cursurilor electronice, în care se ține cont de cunoștințele preexistente ale studenților în fiecare modul propus pentru învățare. Scopul acestei metode este de a asigura că fiecare student își poate dezvolta învățarea în mod individual și eficient, având în vedere nivelul său de cunoștințe preexistente și nevoile specifice de învățare. Această lucrare detaliază remodelarea cursului RC într-o formă de eLearning, bazată pe abordarea MLS. Conținutul cursului este prezentat pe nivele diferite de complexitate și presupune cunoștințe anterioare. Fiecare nivel superior adaugă completări și explică în detaliu subiectele anterioare. Acest lucru reprezintă etapa de explorare a detaliilor subiectului, iar studenții trebuie să înțeleagă și conexiunile interdisciplinare pentru a avea o înțelegere mai profundă. Luând ca bază feedback-ul completat de 98 studenți licență pentru anul de studii 2021/2022, cursul eLearning MLS RC s-a completat cu îndrumar de explicații pas cu pas a sarcinilor pe fiecare tema și modul, sarcini tangențiale ca exemplu celor date la evaluarea finală sub format de individualizare topologii și sarcini de executat. Din motiv că cea mai frecventă cerere a fost cea de a economisi timp pentru a fi pregătiți de procedurile din laborator și de a avea mai multe detalii în materialele didactice.

2. Metode și Instrumente

Învățarea prin intermediul tehnologiilor digitale moderne implică utilizarea computerelor, dispozitivelor mobile și rețelelor de calculatoare pentru prezentarea materialelor didactice și pentru adaptarea metodelor de învățare și predare la un mediu specific. Procesul de învățare este în mare măsură influențat de metodele pedagogice aplicate și de modul în care tehnologia este integrată în aceste metode. Conform cercetărilor științifice, eficiența procesului de învățare nu depinde direct de mediul de învățare utilizat, ci mai degrabă de modul în care sunt aplicate și integrate tehnologiile digitale în procesul educațional. Este important să se realizeze că utilizarea tehnologiei în învățare nu garantează

succesul, însă trebuie să se concentreze pe a spori calitatea procesului de învățare, prin integrarea adecvată și eficientă a tehnologiei și a metodelor pedagogice, astfel încât să poată fi promovată o experiență de învățare eficientă și adaptată [6-8].

Experiența acumulată denotă că adoptarea noilor modalități de învățare bazate pe tehnologia electronică este din ce în ce mai preponderentă. Această abordare vizează să satisfacă cerințele atât ale studenților, cât și ale profesorilor, cu un accent deosebit pe adaptarea procesului didactic pentru a include tehnologia. Cu toate acestea, trebuie subliniat faptul că, până în prezent, nu au fost realizate descoperiri majore în ceea ce privește îmbunătățirea semnificativă a eficacității procesului de învățare prin integrarea tehnologiilor, așa cum unii cercetători au anticipat cu optimism. De asemenea, se pot observa semne ale unei transformări semnificative în tehnicile și strategiile de învățare [9, 10]. Pe de altă parte, se observă o progresivă virtualizare a resurselor educaționale, care înlocuiesc treptat formele tradiționale cu cele digitale.

Tehnologiile digitale și informaționale au jucat un rol vital în menținerea continuității educației în timpul pandemiei de COVID-19. Fără accesul la internet și capacitatea de a utiliza dispozitive electronice, ar fi fost necesar să se găsească soluții alternative pentru participarea la cursuri, dar acestea ar fi fost caracterizate, cu siguranță, prin niveluri mai reduse de interactivitate între profesori și studenți sau de interacțiune între studenți. Aceste circumstanțe au acționat ca un catalizator pentru promovarea alfabetizării digitale a profesorilor și pentru adaptarea la noi forme de predare/învățare și evaluare.

Instrumente TIC aplicate la proiectarea cursului universitar Rețele de Calculatoare:

- Platforma <https://else.fcim.utm.md/my/>, LMS eLearning Space – locație virtuală a cursului, care permite încărcarea și gestionarea conținutului modulelor. pentru cazul discuțiilor utilizat forum [11];
- Microsoft 365 PowerPoint / CANVA pentru elaborarea prezentărilor;
- <https://lectii.utm.md/courses/retele-de-calculatoar-e-computer-networks/> ca sursă de resurse educaționale deschise privind online cele 17 module înregistrate și cele 10 lucrări de laborator înregistrate pas cu pas pentru elaborare [12-14];
- Înregistratoare audio/video Microsoft 365 STREAM sau CAMTASIA cu rol de instrumente TIC pentru formatare.
- <http://repository.utm.md/handle/5014/20549> - elaborarea metodologică se concentrează pe aspectele esențiale ale domeniului rețelelor de calculatoare, având ca scop să asiste utilizatorul în abordarea problemelor specifice legate de proiectarea și administrarea topologiilor de rețea, precum și de analiza și implementarea performanței acestora în structurile rețelelor de calculatoare [15, 16].

Modul de proiectare, scenariul proiectării

Structura cursului a fost împărțită în 3 secțiuni principale [12]:

- Introducere în subiectul cursului; cum să te pregătești pentru înțelegerea conținutului teoretic (descrierea formatului MLS) și cum poți realiza corect lucrările practice și de laborator;
- Cum să ai o pregătire practică ca specialist rețele de calculatoare (întrebări în descrierea situații reale și argument a răspunsului);
- Teorii și practici, calcule și ecuații utilizate la descrierea procedurilor de proiectare și administrare rețea de calculatoare (cum se utilizează echipamentele și descrierile procedurilor / GLOSAR termini/ întrebări și răspunsuri/ feedback studenți la final curs RC).

Definirea structurii de implementare a cursului (structură scurtă):

- Numele cursului
- Definirea tipului de curs
- Definirea comunităților de învățare
- Rezumatul cursului
- Elaborarea programului de curs
- Prezentarea cunoștințelor și abilităților ca rezultat de finalizare a cursului
- Tabel de notare evaluări

În procesul de proiectare a studiului au fost parcurse o serie de etape preliminare. Proces ce reflectă etapele principiului ADDIE – analiză, proiectare, dezvoltare, implementare și evaluare.

În procesul dezvoltării cursului a fost aleasă o structură și un design pentru fiecare modul, dar în linii mari se include:

- Pre-test (test de analiză a cunoașterii inițiale în subiectul cursului);
- Materialele didactice;
- Sarcini după fiecare subiect studiat;
- Sarcini de rezolvare în baza situațiilor reale tangențiale cu sarcini la practica în teritoriu;
- Pachetul de materiale și literatura din domeniu;
- Test de evaluare a cunoștințelor pentru fiecare subiect sau evaluare finală modul, evaluare examen final disciplină.

Conținutul modulelor au fost proiectate ținând cont:

- de metodologia predării online și offline, au fost analizate diferite practici a predării asincrone/sincrone;
- ce instrumente TIC vor fi aplicate în interacțiunea online;
- de competența necesară pentru online;
- rolul rețelelor sociale;
- definirea activităților de învățare raportate pentru interacțiune sincron/asincron.

Situații întâlnite în prezentarea cursului: întrebări, probleme, soluții în crearea și elaborarea formatului de furnizare a cursului RC

1. **De unde începem** – stabilirea și inițierea procesului de lucru (analiză de experiențe în proiectarea cursurilor deschise, studii de caz, scopul misiunii);
2. **Conținutul** modulelor – ce trebuie să conțină fiecare modul, conținut științific (datorită faptului că audiența poate să nu aibă cunoștințe specific despre curs, aspectul prelegerilor ar trebui să fie concis și concentrate pe fiecare subiect din curriculum);
3. **Structura modulelor și sincronizarea** lor – modulele cursului să fie structurate în același mod; materialele didactice se structurează în referință de timpul de învățare; cât ar trebui să dureze sesiunea online; care este modul și forma potrivită de prezentare a subiectului. (Sa decis să se stabilească același cadru pentru fiecare modul);
4. **Combinăția dintre contribuția eLearning și implicare** profesor (teste, sarcini, forum) poate varia în funcție de obiectivele cursului și de grupul de studenți);
5. **Metode de predare** (pre test pentru fiecare modul – cu scop de a obține o idee despre nivelul cunoștințelor inițiale / de bază pe subiectul cursului; sarcini ca urmare a

subiectelor din cadrul fiecărui modul – cu scop de a introduce studenții către obiective de bază ce vor fi discutate în curs; pentru cazul prelegerii sau discuții pentru opinii diferite – pentru a observa evoluțiile studenților de la un modul la altul). La final de fiecare modul vedem un set de întrebări raportat la conținut (întrebări cu răspunsuri multiple cu scop de a verifica înțelegerea, întrebări cu format creativ sau de rezolvare a problemelor – cu rol de a face fiecare student să aplice cele studiate în conținut teoretic și practic dedicat fiecărui capitol în parte). Studentul pus în situația de a găsi soluții reale folosind teoriile învățate în curs. Prelegerea video a fiecărui modul urmărește respectarea regulilor ce țin de: simplitate, bazată pe subiect, captarea atenției, implicare pozitiv emoțională prin aplicarea analogiilor, metafore și studiu de caz.

- 6. Instrumente TIC utilizate la proiectarea materialelor didactice în cursul RC** – canalul utilizat în comunicarea sincronă și asincronă atât cu studenții cât și studenții între ei (în cazul disciplinei Rețele de Calculatoare LMS utilizat else.fcim.utm.md cu opțiuni de forum cu scop de învățare și comunicare, pachetul Microsoft 365 și sursa de resurse educaționale lectii.utm.md). Instrumente TIC aplicate pentru proiectarea conținutului, în practica cursului prezentări CANVA sau Microsoft PowerPoint, pentru formatarea video Microsoft Stream (desigur pot fi aplicate și alte instrumente TIC).

3. Învățarea în mai multe etape (MLS) aplicat

Ca motiv de bază fiind faptul că în sala de clasă avem o variație enormă a cunoștințelor ce au studenții (nivelul de pregătire anterioară) cursul a fost împărțit pe nivele de complexitate a conținutului (nivel începători, mediu, avansat) [18].

Ca finalitate rezultatele au fost comparate utilizând <https://else.fcim.utm.md/mod/feedback/> [19], din date selectate de la 98 studenți FCIM/FAF/, factor de Analiză (calculat automatizat în baza formulei de sistem) cu valoarea de 4,42 considerat semnificativ satisfăcuți (Figura 1).

Chestionar ce cuprinde 12 întrebări completate cu răspunsuri de la 98 studenți de la Universitatea Tehnică a Moldovei, Facultatea Calculatoare, Informatică și Microelectronică.

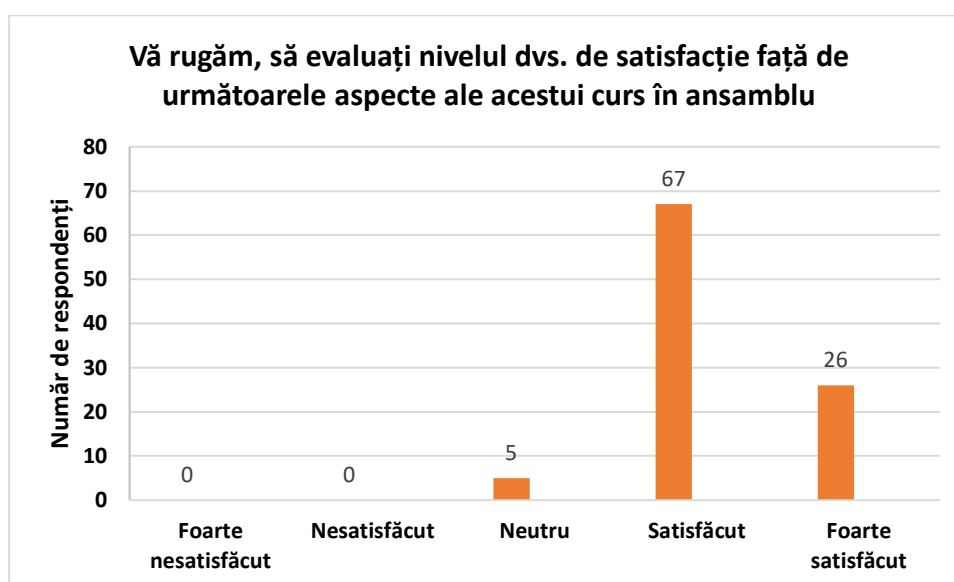


Figura 1. Reprezentare grafică a nivelului de satisfacție în raport cu cursul.

Sursa: creat de autor în baza rezultatelor din sondaj.

Colecția de răspunsuri divizate pe interes de abordare la subiectul lucrării sunt descrise în format grafic, la alte întrebări incluse în chestionar vor fi cercetate în continuare și discutate într-o altă lucrare.

Nivelurile cumulate de succes la final de disciplină se verifică prin examen final (după aplicarea cursului eLearning MSL, pentru semestrul I anul de studii 2021-2022). Rezultatele au fost raportate și la întrebările tangențiale cu referire la nivel de competențe, factor de Analiză cu valoarea de 3,98 în parametri de sistem, considerat semnificativ încrezuți în abilitățile formate și competența în situații problemă din domeniul rețelelor (Figura 2).

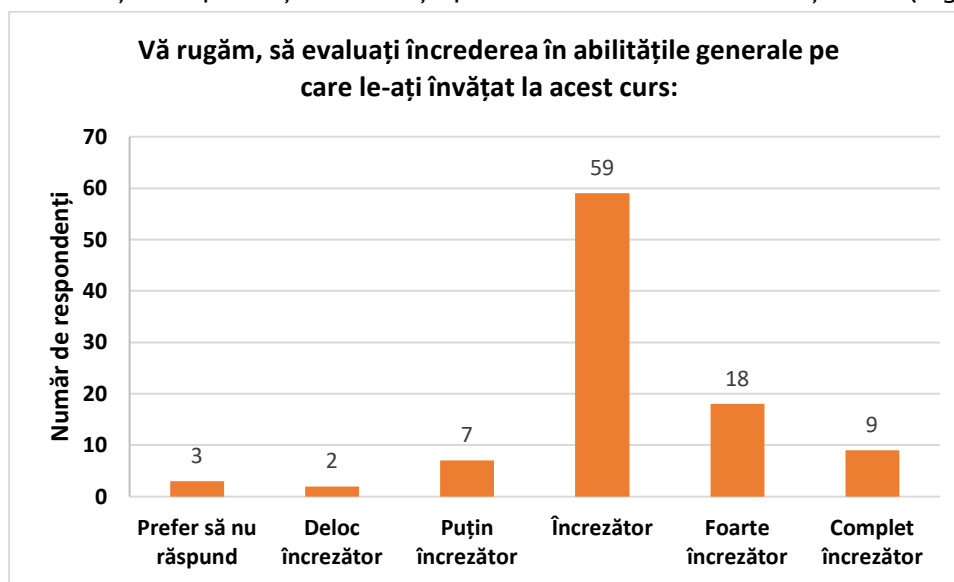


Figura 2. Reprezentare grafică a nivelului de competență.

Sursa: creat de autor în baza rezultatelor sondajului.

4. Analiza rezultatelor

Un beneficiu major adus de cursul eLearning MLS rețele de calculatoare a fost durata de explicare a conținutului teoretic **timpul** (de câteva ori explicat același modul, la o ascultare a înregistrării de către fiecare student și semnificativ a fost redus în a explica tema în sala de clasă pentru înțelegerea subiectului de către fiecare student). Studenții au apreciat și au folosit timpul economisit pentru alte sarcini practice. Profesorul a explicat mai puțin timp pașii individuali ai procedurii de proiectare și s-a putut concentra mai mult pe explicarea și clasificarea principiilor cheie de lucru într-o rețea și subtilități a proceselor.

Nivelul de înțelegere a termenilor și conceptelor importante de rețea, au fost redade prin Examen final pe discipline (verificare a cunoștințelor și abilități finale). Nivelurile individuale de succes (Figura 3) pentru un anumit tip de întrebare (Formatul de adresă IPv4/IPv6, Servere virtualizate sau Mașini virtuale) arată o schimbare pozitivă ne semnificativă dar distinsă în testul 2021/2022 ca comparație cu testul final din 2020/2021 (Tabelul 1). Însă se demonstrează că nu avem nici o schimbare (sau neglijabil negative) a nivelului de succes pentru conținut abordat modul Cloud Computing (Figura 3).

Comparația dintre nivelurile cumulate de succes ale testului propus la examen final 2020/2021 vs 2021/2022 disciplina rețele de calculatoare, reprezentată de raport [10%] a numărului de puncte acumulat de la răspunsuri corecte raportat la număr total de puncte acumulate din răspunsuri.

Feedback-ul de la studenți (facultatea Calculatoare Informatică și Microelectronică, grupe FAF ingineria software), grupul țintă principal obținut prin chestionar electronic (Tabelul 1).

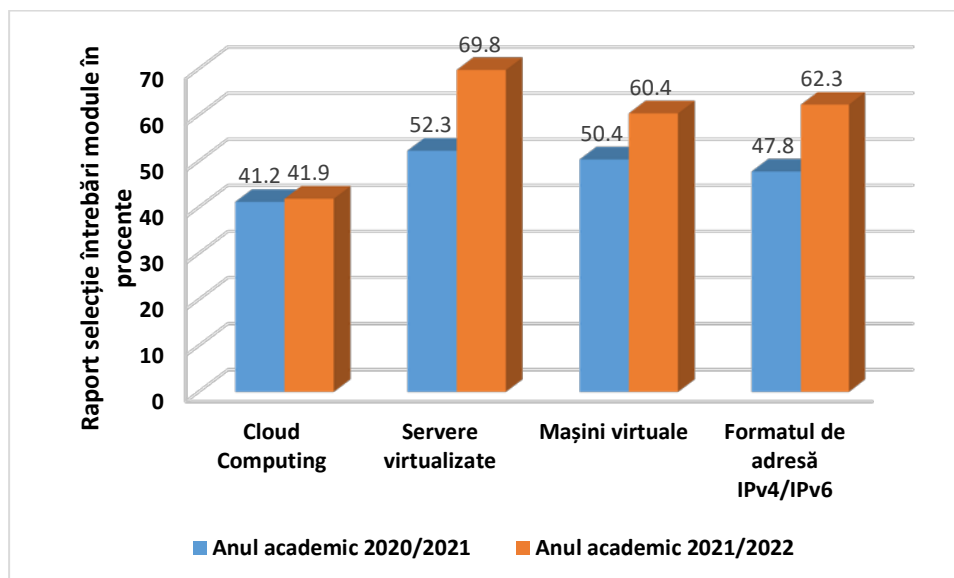


Figura 3. Compararea rezultatelor evaluării finale ani de studiu 2020/2021 vs 2021/2022.

Sursa: creat de autor în baza rezultatelor sondajului.

În septembrie 2021 am împărțit în două grupe conform datelor din protocoalele de activitate din MOODLE. Grupa 1 a inclus studenți care nu au prezentat nici un rezultat (45 de studenți). Grupa 2 a fost reprezentată de studenți care au accesat cursul după rezolvarea pre-test (53 studenți). Ambele grupuri au primit formele de testări și interacțiune conținut curs (prezența, practice, link-uri informative) în MOODLE, ce le permite studenților să primească rezultatele din răspunsuri sau grafice rezumative (Figura 4).

Majoritatea instituțiilor de învățământ superior din Republica Moldova au dezvoltat propriile platforme de învățare, având MOODLE ca bază.

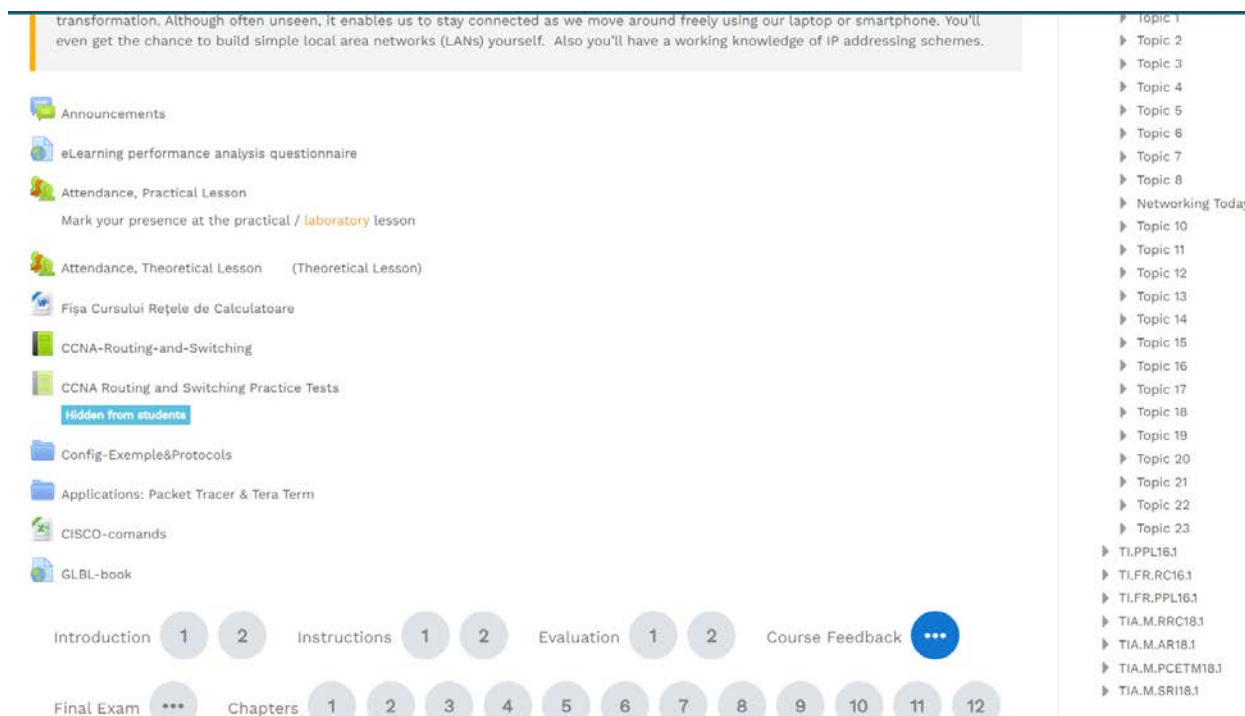


Figura 4. Captură de ecran ce cuprinde modelul de proiectare unității de curs Rețele de Calculatoare.

Sursa: <https://else.fcim.utm.md/course/view.php?id=569>.

Alegerea de a utiliza MOODLE este motivată, în special, de natura sa „open source” și de flexibilitatea de a personaliza platforma prin adăugarea de module specifice necesare instituției sau modului de instruire selectat în cadrul cursurilor.

Scopul pre testului pentru Grupul 1 a fost de a obține informații de nivelul de pregătire sau cunoștințe până la startul conținutului pentru cursul rețele de calculatoare. Scopul chestionarului conceput pentru Grupul 2 a fost de a obține feedback detalii asupra cursului, cu scop de a afla dacă cursul și-a atins obiectivele, ce a funcționat bine sau nu și ce probleme ar trebui puse în discuție. Răspunsurile celor 53 de studenți au oferit feedback valoros, ceea ce a dus la completarea MLS curs cu îndrumar de probleme rezolvate pas cu pas și explicate (Tabelul 1).

Tabelul 1

Compararea punctajului acumulat în funcție de numărul de răspunsuri

Anii academici		Punctajul obținut în funcție de numărul de răspunsuri
2020/2021	Cu răspuns corect	108
	total	196
	rata [%]	55,1
2021/2022	Cu răspuns corect	115
	total	185
	rata [%]	62,16

Rezultatele învățării, evaluarea abilităților cognitive și de comunicare ale studenților în procesul de evaluare este conform modelului (Figura 3) a fost redat prin rezolvarea sarcinilor de competențe individuale (de ex. proiectarea topologiei de rețea) și colective (proiect de proiectare, administrare și securizare a unei rețele complexe).

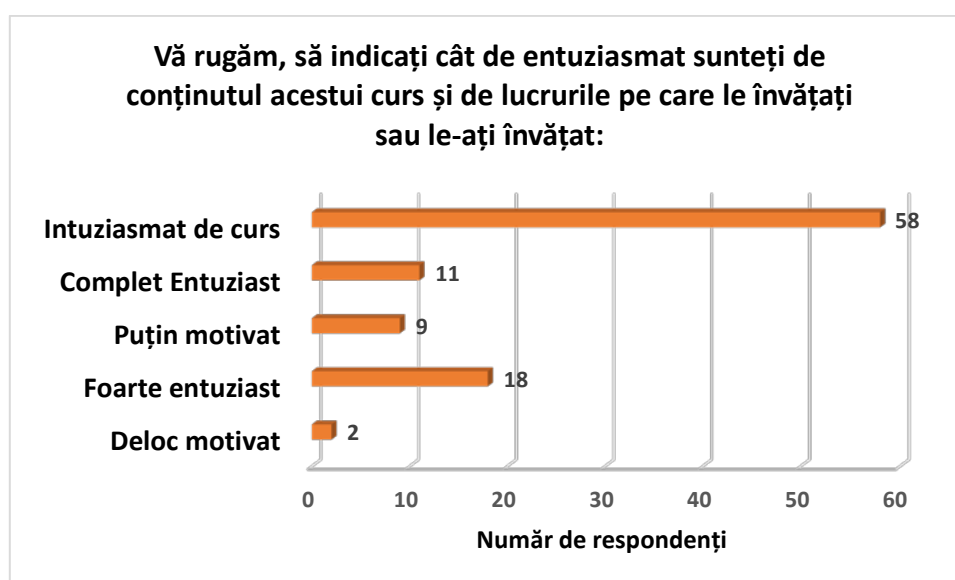


Figura 5. Analiza progresului și atitudinilor în rândul participanților față de curs.

Sursa: creat de autor în baza rezultatelor sondajului.

Componentele de monitorizare și evaluare a competenței TIC prin testare profesională și specifică (referitor autoevaluarea studenților), examen final arată pregătirea de calitate profesională a studenților. Rezultatele testării nivelului de competență finală în domeniul rețele al studenților au crescut în medie de 10% raportat la nivelul de intrare al competențelor profesionale și specifice (autoevaluarea studenților). Potrivit studenților care progresează folosesc eLearning (Figura 3), majoritatea studenților preferă formatul de implementare practică (Figura 5). În comentariile studenților se observă un nivel ridicat de pregătire de a utiliza cunoștințele în propria carieră (Figura 6).

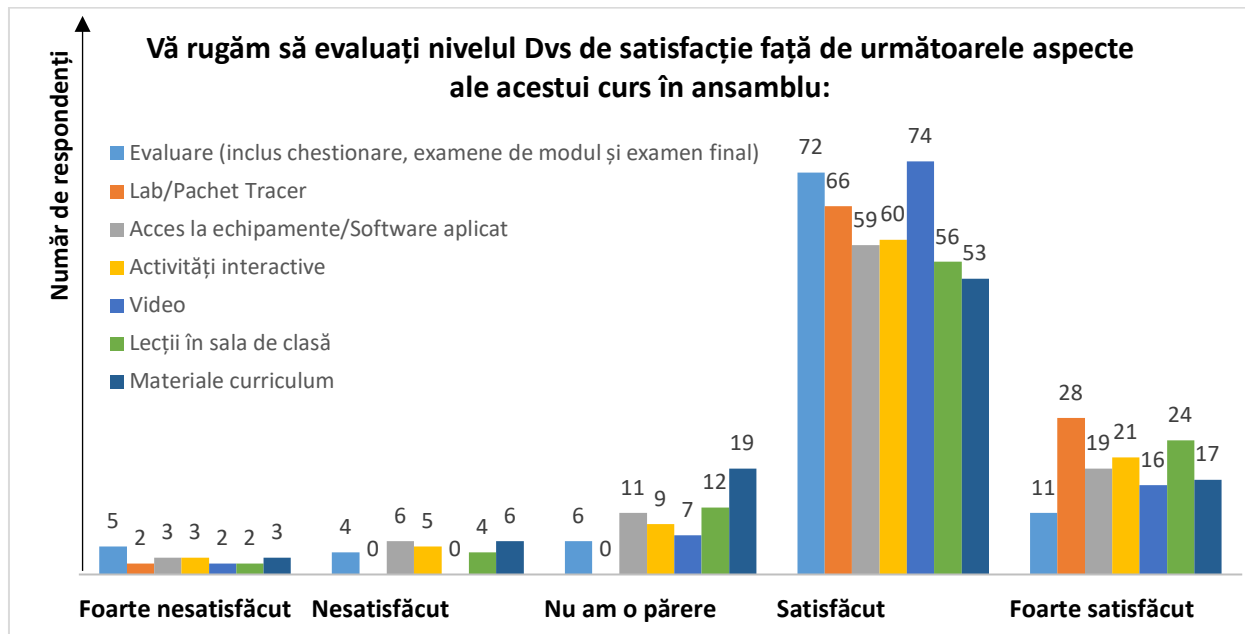


Figura 6. Analiza nivelului de satisfacție și identificarea metodelor considerate a fi eficiente pentru îmbunătățirea procesului educațional, conform opiniei respondenților.

Sursa: creat de autor.

Rezultatele obținute sunt prezentate în Figura 6. Răspunsurile respondenților arată că cele mai bune rezultate se obțin folosind metode de învățare bazate pe exerciții. Aproximativ o treime dintre respondenți au spus că prelegerea a fost cea mai bună.

O concluzie de căutare se concentrează pe reflecția respondenților asupra abilităților de proiectare și administrare rețele de calculatoare, abilități dezvoltate după studierea disciplinei universitare Rețele de Calculatoare. O concluzie este că formatul de proiectare și redare a cursului Rețele de Calculatoare a influențat pozitiv abilitățile atât de necesare unui specialist în rețea și studenții sunt motivați ca să continue această direcție spre dezvoltare. Nu a fost surprinzător să descoperim că 11 studenți (ceia ce constituie 8,9% cifră ne semnificativă) dintre respondenți au declarat că cursul nu le-a influențat abilitățile în domeniu și nu sunt motivați pentru această direcție. Însă, sună încurajator faptul că restul 87 de studenți recunosc că cursul le-a influențat și motivat abilitățile (Figura 7).

Pentru studenții cu cele mai mari medii la notare, în baza rezultatelor pe parcursul studierii cursului universitar, li sa sugerat să certifice cunoștințele acumulate prin participarea la 1 examen de verificare a competențelor teoretice (60 întrebări teoretice) și cel de al doilea examen verificare a abilităților practice.

Rezultatele menționate mai sus arată că pentru ca e-Educația contemporană să fie foarte apreciată trebuie să existe o implicare mai mare a instrumentelor care să permită o gamă largă de interacțiuni între profesori și studenți, precum și dintre studenți [20, 21].

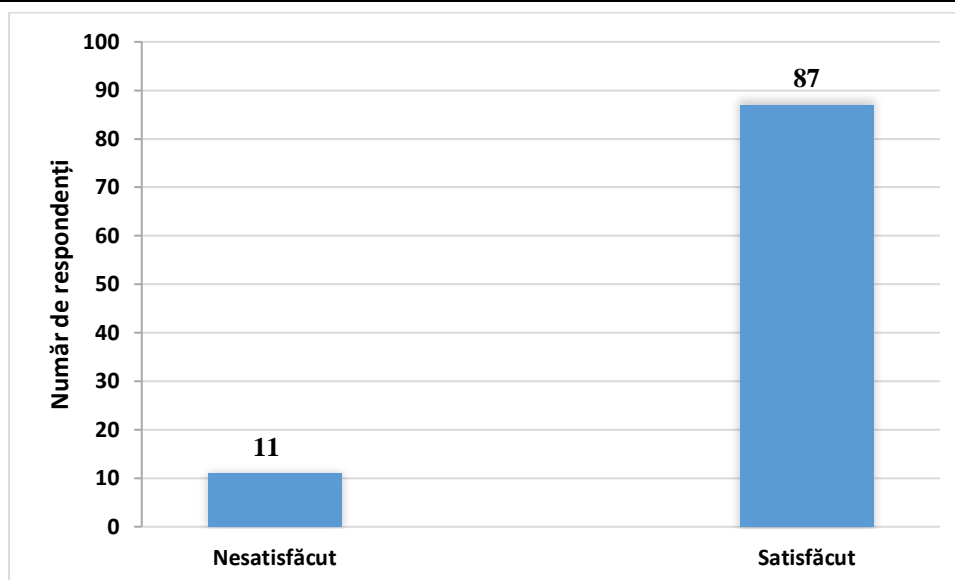


Figura 7. Nivelul de satisfacție și metode ce fac educația mai eficientă în opinia respondenților.

Sursa: creat de autor.

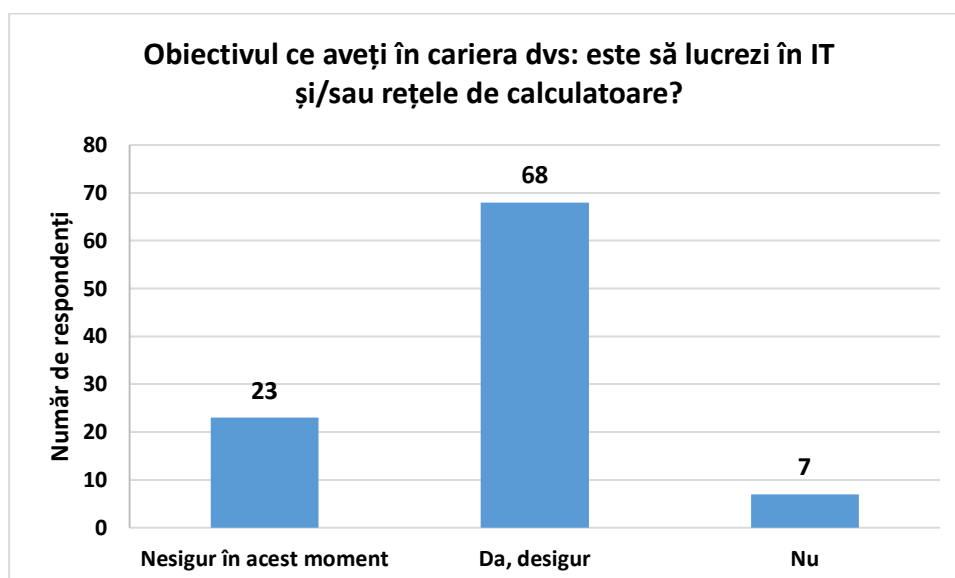


Figura 8. Nivelul de competență reprezentat în număr de studenți (completare formular Microsoft, 98 studenți participanți).

Sursa: creat de autor în baza rezultatelor sondajului.

Pentru studenții cu cele mai mari medii la notare, în baza rezultatelor pe parcursul studierii cursului universitar, a fost sugerat să certifice cunoștințele acumulate prin participarea la 1 examen de verificare a competențelor teoretice (60 întrebări teoretice) și cel de al doilea examen verificare a abilităților practice. Dintre 98 răspunsuri respondenți, 68 se califică cu abilități practice bine dezvoltate pe parcursul predării cursului universitar Rețele de Calculatoare și sunt gata să-și urmeze cariera în domeniu (Figura 8).

Pe lângă rezultatele prezentate mai sus, feedback-ul a oferit unele propuneri de completare a formatului de curs. Tabelul 2 rezumă unele comentarii.

De asemenea, respondenților li s-a cerut să noteze aspectul de structură a cursului (Figurile 6 și 7) cu note de la 1 la 5, nota medie la LMS MOODLE calculată în baza de formulă implicită în sistem este în valoare de 4,37.

Tabelul 2

Analiza comentariilor utilizatorilor și reacțiile creatorului cursului de eLearning MLS

Comentarii de la studenți	Reacția din partea creatorului de curs
Unele mici erori în curs.	Corectarea erorilor și înregistrarea acestor modificări în forum.
E-learning nu este pentru mine.	Avantaje și dezavantaje ale eLearning.
Feedback-ul după lecții este prea întârziat.	Feedback-ul după fiecare exercițiu este imediat însoțit de argument.
Probleme tehnice.	Actualizarea Moodle explică aceste măsuri luate. else.fcim.utm.md
Accesul pe lecții.utm.md restricționat.	Administrator platformă explică necesitatea înregistrării la curs.

Nota: Comentarii de la utilizatori și reacții ale creatorului de MLS eLearning curs.

Scopul feedback-ului a fost bine definit și a avut o abordare dublă: în primul rând, de a încuraja participanții să opteze pentru o calificare în domeniul tehnic ingineresc, iar în al doilea rând, de a-i invita la colaborare pentru a îmbunătăți cursul. Feedback-ul obținut din aceste cercetări oferă informații valoroase pentru viitoarele îmbunătățiri ale cursului RC. Opiniile și sugestiile primite de la respondenți sunt luate în considerare în procesul de dezvoltare continuă, asigurând astfel o experiență de învățare îmbunătățită pentru participanți. Utilizarea scalei de evaluare în LMS MOODLE este un instrument util pentru colectarea de date și pentru a obține o perspectivă mai clară asupra calității cursului și a modului în care este perceput de către studenți.

Observații realizate în baza cercetărilor efectuate, feedback-ului și experienței de proiectare a modulelor din cadrul cursului RC:

1) În ciuda existenței anumitor practici și cercetări, cursurile deschise ca efort pedagogic sunt încă în volum nu mare în ce ține accesarea de către profesori și studenți. Deși, tot mai multe instituții se alătură curentului principal în încercările lor de a stabili învățarea online și cursuri deschise cu ambiția: să urmeze tendințele moderne în pedagogie.

2) Să facă instituțiile vizibile pe piața serviciilor de învățare și să ajungă la comunități mai largi. a studenților. În aceste sens, profesorii își transformă stilurile și metodele de predare la modul de învățare virtuală și căuta soluții adecvate prin aplicarea instrumentelor TIC.

3) Proiectarea cursurilor universitare deschise, impune necesitatea de competențe interdisciplinare, expertiză în conținutul cursului, competențe în proiectarea și evaluarea instrucțională, cunoștințele și abilitățile instrumentelor TIC. Competențe pentru a găsi o soluție cum de a converti predarea tradițională, care în condiții reale poate varia de la prelegeri la discuții și povestiri, la modul virtual, sunt de mare importanță. Acestea presupun o cunoaștere largă a tehnologiilor emergente, care pot fi utilizate împreună sau înlocuindu-se unele pe altele pentru a facilita procesul de proiectare a cursului și de învățare online ulterioară [22-24].

4. Ca fenomen pedagogic, educația deschisă în cercetarea autorului este o căutare continuă de soluții adecvate chiar și după implementarea cursului în ansamblu. Elementele observabile sunt puse în modificare după faza inițială de implementare și prezentare a eCursului RC pentru programe de studiu licență de la FCIM a UTM.

5. Corelarea constructivă în învățământul universitar, inclusiv în contextul eLearning, presupune crearea unui mediu de învățare care să faciliteze activitățile de învățare relevante pentru ca studenții să-și construiască propria învățare. În acest sens, toate componentele sistemului de instruire, cum ar fi competențele, finalitățile de studii, strategiile de predare, resursele de eLearning și instrumentele de evaluare, trebuie să fie corelate reciproc pentru a asigura atingerea obiectivelor de învățare în cadrul programelor și a fiecărui curs sau modul. Astfel, corelarea pe orizontală în eLearning contribuie la optimizarea procesului de învățare, promovând o implicare activă și un nivel înalt de performanță în mediul digital.

5. Concluzii

Cursul de eLearning "MLS Rețele de Calculatoare" a fost bine primit de către studenți și a demonstrat o economie semnificativă de timp în procesul de înțelegere a conținuturilor. De asemenea, cursul a contribuit la o mai bună înțelegere a principiilor de proiectare în rețea și a subtilităților legate de administrarea rețelelor. Acest lucru este evident în rezultatele obținute în urma aplicării testului final, în comparație cu anii academici 2020/2021 și 2021/2022.

Procesul de admitere a studenților din medii diverse într-un program MLS implică faptul că aceștia vin cu diferite niveluri de abilități și competențe atunci când încep cursurile. Se presupune adesea că studenții care finalizează cu succes programul MLS au deja o înțelegere solidă a domeniului. Acest studiu calitativ se concentrează pe auto-reflecțiile studenților în timpul finalizării modulelor de rețele de calculatoare și analizează datele colectate pe parcursul a două semestre consecutive.

Până în prezent, rezultatele indică faptul că studenții percep în general modulele ca fiind valoroase și consideră că cunoștințele și conceptele acumulate în domeniul rețelelor de calculatoare din experiența lor anterioară sunt de ajutor. Ei raportează că folosesc aceste abilități și competențe acumulate și au planuri de a le aplica în viitor, fie la locul de muncă, fie în viața lor personală.

Lucrarea se concentrează și pe evaluarea acestui curs pilot pe baza statisticilor Moodle.utm.md și else.fcim.utm.md. Studenții cu un nivel ridicat de competență au hotărât să-și dezvolte abilitățile și la următoarele nivele de studiu în domeniul rețele, de exemplu nivelul de complexitate medie și ridicată precum „Securitatea și administrarea în rețea”, consideră cursul foarte util și exprimă recunoștință. Informațiile suplimentare colectate în cadrul chestionarului au fost folosite cu scop de a îmbunătăți conținutul și livrarea cursului. Cursul este în permanentă actualizare după formatul de adaptare a studenților.

Prin adăugarea de varietate la curriculum, prin crearea unui mediu îmbunătățit pentru eLearning, profesorii pot dezvolta programe care să facă studenții mai motivați și să-i implice întru dezvoltarea competențelor profesionale. Astfel de proiecte de instruire pot contribui la creșterea calității predării și învățării și la crearea de noi oportunități de dezvoltare a competențelor și abilități.

Conflicte de interes. Autorii nu declară nici un conflict de interese.

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Citation: Peca, L.; Dumbraveanu, R.; Turcanu, D. Optimizing computer network learning through sequential e-learning based on digital technology. *Journal of Social Sciences*. 2023, 6 (3), pp. 126-140. [https://doi.org/10.52326/jss.utm.2023.6\(3\).10](https://doi.org/10.52326/jss.utm.2023.6(3).10).

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Submission of manuscripts:

jes@meridian.utm.md

[https://doi.org/10.52326/jss.utm.2023.6\(3\).11](https://doi.org/10.52326/jss.utm.2023.6(3).11)
UDC 378.1.012(672.4)



STUDENT EVALUATION OF TEACHING QUALITY AT THE UNIVERSITY OF KINSHASA

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Received: 08. 05. 2023

Accepted: 09. 20. 2023

Abstract. The aim of this study was to obtain information on the perception of Université de Kinshasa students of the quality of the education provided at their institution. The study was based on two hypotheses: (1) Université de Kinshasa students would have a positive appreciation of the quality of the education they receive; (2) socio-demographic variables such as age, gender, promotion and department would influence students' assessment of the quality of the education they receive. To test this hypothesis, a scale was designed and administered to 114 students from the University of Kinshasa, Faculty of Psychology and Educational Sciences. The scale assessed four dimensions of teaching quality: the quality of teaching planning, teachers' performance, learning assessment and teachers' mastery of the subject. The results show that students at the University of Kinshasa have a positive assessment of the teaching provided at their institution. In other words, they affirm that the quality of teaching at their university is good. This quality is reflected in four indicators: (1) good planning of teaching by teachers, (2) good performance by teachers, (3) good assessment of learning and (4) mastery of the subject by teachers.

Keywords: *evaluation, teaching quality, students, University of Kinshasa, teaching planning.*

Rezumat. Scopul acestui studiu a fost de a obține informații despre percepția studenților de la Universitatea din Kinshasa asupra calității educației oferite în instituția lor. Studiul sa bazat pe două ipoteze: (1) studenții de la Universitatea din Kinshasa ar avea o apreciere pozitivă a calității educației pe care o primesc; (2) variabile socio-demografice precum vârsta, sexul, promovarea și departamentul ar influența evaluarea de către elevi a calității educației pe care o primesc. Pentru a testa această ipoteză, a fost concepută și administrată o scală pentru 114 studenți de la Universitatea din Kinshasa, de la Facultatea de Psihologie și Științe ale Educației. Scala a evaluat patru dimensiuni ale calității predării: calitatea planificării predării, performanța profesorilor, evaluarea învățării și stăpânirea disciplinei de către profesori. Rezultatele arată că studenții de la Universitatea din Kinshasa au o evaluare pozitivă a predării oferite în instituția lor. Cu alte cuvinte, ei afirmă că calitatea predării la universitatea lor este bună. Această calitate se reflectă în patru indicatori: (1) o bună planificare a predării de către profesori, (2) o bună performanță de către profesori, (3) o bună evaluare a învățării și (4) o stăpânire a disciplinei de către profesori.

Cuvinte cheie: *evaluare, calitatea predării, studenți, Universitatea din Kinshasa, planificarea predării.*

1. Introduction

L'évaluation de l'efficacité des actions de formation universitaire est aujourd'hui plus que jamais une nécessité évidente et fait partie des missions essentielles auxquelles tout établissement universitaire soucieux de promouvoir la qualité de ses outputs se propose d'atteindre [1]. Aucune université ne peut se contenter de former pour former. La formation universitaire étant un investissement qui prend du temps et qui coûte cher plus qu'un investissement matériel, il devient ainsi important de connaître ou de situer le retour d'investissement de cette formation pour être sûr de la rentabilité.

Dans ce contexte, évaluer l'efficacité de la formation universitaire consisterait à apprécier la capacité de l'université à satisfaire les objectifs lui assignés par le pouvoir public dans une perspective pédagogique [2]. Dans ce processus d'évaluation de l'efficacité, les étudiants ne doivent pas être négligés car ils peuvent apporter des informations fidèles et valides pouvant aider les enseignants à revoir leurs façons d'enseigner. D'ailleurs, les spécialistes et les chercheurs en évaluation de l'enseignement accordent beaucoup d'importance à l'évaluation de la prestation de l'enseignement par les étudiants. Plusieurs spécialistes de l'évaluation, comme l'affirme Bernard [3], ont démontré que les étudiants sont des évaluateurs valides pour juger de la prestation d'un professeur et de certains aspects de sa planification de cours. En effet, à titre de destinataires de l'enseignement et de participants réguliers aux activités d'enseignement d'un professeur, ils sont des observateurs de première ligne.

Malheureusement, l'idée d'être évalués par les étudiants est mal perçue par les enseignants car ces derniers craignent la subjectivité des étudiants et leur manque de compétences à évaluer la qualité de leurs enseignements. Par ailleurs, Pelpel [4] pense que cette évaluation, bien que subjective, est très importante, étant donné qu'elle permet aux enseignants d'obtenir un feedback en rapport avec leurs activités et les stratégies d'enseignement en vue de rectifier leurs erreurs éventuelles et de faire tirer un maximum de profit de la formation aux étudiants. Ce type d'évaluation est, de nos jours, très répandu en Europe et fait l'objet de plusieurs études comme l'affirment Postiaux et Salcin [5].

En République Démocratique du Congo, ce type d'évaluation pose problème car il est difficilement accepté par les enseignants. D'ailleurs, à l'époque de l'Université Nationale du Zaïre, les autorités avaient essayé d'y recourir mais malheureusement les conclusions n'étaient pas fameuses à cause du tribalisme qui l'a caractérisé [6]. En plus, les études portant sur ce type d'évaluation sont rares et ne permettent pas d'avoir les points de vue des étudiants sur la qualité de l'enseignement qu'ils sont bénéficiaires. Parmi ces rares études, on peut citer celles de Makinisi [7] et d'Enguta [8] qui se sont contentées d'évaluer la qualité de l'enseignement du cours de Méthodes de Créativité et Innovations.

Ces études ont pour limite le fait d'être menées que sur un seul cours en lieu et place de s'étendre sur tous les enseignements dispensés à l'Université congolaise. La présente étude s'inscrit derrière ces deux études antérieures et se propose d'évaluer globalement la qualité de l'enseignement dispensée à l'Université de Kinshasa (et plus précisément à la Faculté de Psychologie et de Sciences de l'Éducation). Elle permet ainsi de donner une vision globale de la qualité de l'enseignement dispensé dans cette faculté en partant des points de vue des étudiants. Cette préoccupation de notre étude donne lieu à deux questions suivantes: (1) quelle est l'appréciation des étudiants de l'Université de Kinshasa de la qualité de l'enseignement dont ils sont bénéficiaires?; (2) les variables sociodémographiques (telles que le sexe, l'âge, la promotion et le département) influent-elles sur l'appréciation des étudiants de la qualité de l'enseignement suivi? Face aux questions de l'étude, nous

émettons les hypothèses suivantes: (1) les étudiants de de l'Université de Kinshasa auraient une appréciation positive de la qualité de l'enseignement dont ils sont bénéficiaires; (2) les variables sociodémographiques telles que l'âge, le sexe, la promotion et le département influeraient sur l'appréciation des étudiants de la qualité de l'enseignement suivi.

2. Méthodologie

2.1. Cadre Physique

L'Université de Kinshasa (Unikin) est une université publique située à plus ou moins 25 km du Centre-ville de Kinshasa, dans la Commune de Lemba, plus précisément sur le Mont-Amba, sur une étendue de 400 hectares. Elle organise les activités d'enseignement et de recherche à travers ses treize facultés: (1) Droit, (2) Médecine, (3) Polytechnique, (4) Sciences et Technologies, (5) Lettres et Sciences Humaines, (6) Sciences Economiques et de Gestion, (7) Sciences Sociales, Politiques et Administratives, (8) Pharmacie, (9) Médecine Vétérinaire, (10) Sciences agronomiques et environnement, (11) Pétrole, Gaz et Energies Renouvelables (12) Psychologie et Sciences de l'Education ainsi que (13) Médecine dentaire.

2.2. Participants à l'étude

Notre population d'étude est constituée des étudiants de toutes les facultés de l'Université de Kinshasa. De toutes ces facultés, nous avons tiré au sort la faculté de Psychologie et des Sciences de l'Education qui a constitué la population cible de l'étude. De cette population, un échantillon peu représentatif de 114 sujets a été extrait. Cet échantillon varie en fonction des variables sociodémographiques suivantes : le sexe, l'âge, la promotion et le département. Du point de vue du sexe, notre échantillon est constitué de 64 hommes contre 50 femmes. S'agissant de la variable âge, on a 27 sujets âgés de 20-22 ans, 40 de 23-25 ans, 25 de 26-28 ans et 22 de 29 ans et plus. En ce qui concerne la promotion d'études, on a 13 sujets de la première année universitaire, 32 de la deuxième année universitaire, 10 de la troisième année universitaire, 12 de la quatrième année et 45 de la cinquième année universitaire. Enfin, s'agissant des départements, on a 28 sujets des sciences psychologiques, 31 des sciences de l'éducation et 55 des sciences de gestion des entreprises.

2.3. Instrument de récolte des données

Pour récolter les données de l'étude, nous avons recouru à une échelle d'évaluation de la qualité de l'enseignement que nous avons conçue en nous inspirant du questionnaire de la qualité des enseignements de Bernard [3]. Cette échelle est constituée de 21 items (questions) évaluant la qualité de l'enseignement sous quatre aspects : (1) la qualité de la planification de l'enseignement, (2) la prestation des enseignants, (3) les apprentissages réalisés par les étudiants durant les cours et (4) la maîtrise de la matière chez les enseignants. Pour chaque aspect ou thématique de l'échelle, le sujet est invité à évaluer la qualité de l'enseignement en indiquant s'il est totalement en désaccord (TD), en désaccord (D), en accord (A) et totalement en accord (TA) avec les énoncés des items. Cette échelle a une homogénéité interne avec des alphas de Cronbach supérieurs à .70. (qualité de la planification de l'enseignement : 0,71, prestation des enseignants : 0,73, évaluation des apprentissages : 0,75 ; maîtrise de la matière chez les enseignants : 0,72 et ensemble de l'échelle : 0,89).

3. Résultats de l'étude

3.1. Résultats globaux

Les résultats de l'étude sont présentés de façon globale sans tenir compte des spécificités des variables sociodémographiques. Cette présentation, quoi que globale, se fait

question par question, et cela, en fonction des thèmes de l'échelle d'évaluation de la qualité de l'enseignement.

3.1.1. Premier thème: *Qualité de la planification de l'enseignement*

Ce thème de l'échelle est constitué des items n° 1, 2, 3, 4, 5, 7, 8 et 9. Les réactions de nos sujets à ces items sont présentées dans le tableau suivant.

Tableau 1

Résultats liés à la qualité de la planification de l'enseignement

Questions	Degré D'appréciation				Total
	TD	D	A	TA	
1. Le plan des cours indique clairement le déroulement et les grandes lignes de ces cours.	18 (15,8%)	36 (31,6%)	48 (42,1%)	12 (10,5%)	114 (100%)
2. Chaque séance de cours est bien organisée conformément aux normes pédagogiques (respect de nombre d'heures par séance).	14 (12,2%)	37 (32,5%)	49 (43,0%)	14 (12,3%)	114 (100%)
3. Les objectifs pédagogiques des cours sont clairement définis et exposés par les animateurs.	15 (13,2%)	27 (23,7%)	60 (52,6%)	12 (10,5%)	114 (100%)
4. Les modalités d'évaluations des travaux pratiques, interrogations et examens sont clairement expliquées par les animateurs des différents cours.	15 (13,2%)	29 (25,4%)	58 (50,9%)	12 (10,5%)	114 (100%)
5. Les contenus des syllabus sont présentés clairement et dans un langage compréhensible.	13 (11,4%)	25 (21,9%)	66 (57,9%)	10 (8,8%)	114 (100%)
7. Les plans des cours sont parfaitement respectés.	10 (8,8%)	27 (23,7%)	57 (50,0%)	20 (17,5%)	114 (100%)
8. A l'issue de l'enseignement, les objectifs pédagogiques ont été atteints avec succès.	11 (9,6%)	27 (23,7%)	54 (47,4%)	22 (19,3%)	114 (100%)
9. Le contenu du cours est en relation avec les objectifs pédagogiques de chaque cours.	13 (11,4%)	23 (20,2%)	51 (44,7%)	27 (23,7%)	114 (100%)

Légende: TD - Totalemment en Désaccord, D - En désaccord, A - en Accord et TA - Totalemment en Accord.

La lecture du Tableau n°1 révèle que 52,6% de sujets, à des degrés différents, affirment que les plans des cours dispensés dans leur faculté indiquent clairement le déroulement et les grandes lignes des cours contre 47,4% de sujets qui ont un avis contraire.

Du même tableau, on constate que 55,3% de sujets affirment que chaque séance des cours est bien organisée et se conforme aux normes pédagogiques contre 44,7% de sujets qui ont un avis contraire. On constate du même tableau que 63,1% de nos enquêtés, à des degrés différents, affirment que les objectifs pédagogiques des cours dans leur faculté sont clairement définis et exposés par les enseignants contre 36,9 % de sujets qui ont un avis différent. En plus, 61,4% de sujets affirment que les modalités d'évaluation des travaux pratiques, interrogations et examens sont clairement expliquées par les enseignants contre 38,6 % de sujets qui ont un point de vue différent.

De ce même tableau, on constate que 66,7 % de sujets, à des niveaux différents, affirment que les contenus des syllabus sont présentés clairement et dans un langage compréhensible dans leur faculté contre 33,3 % de sujets qui ont un point de vue différent. Il ressort du même tableau que 67,5 % de sujets, à des degrés différents, affirment que les plans des cours dans leur faculté sont parfaitement respectés par les enseignants contre 32,5% de sujets qui ont un point de vue différent. Du même tableau, 66,7% de sujets, à des degrés différents, affirment que les objectifs pédagogiques de différents cours qu'ils ont suivis dans leur faculté sont atteints avec succès contre 33,3% de sujets qui ont un avis contraire. Enfin, on constate du même tableau que 68,4% de sujets de l'étude, à des degrés différents, approuvent l'adéquation des contenus des cours qu'ils ont suivis avec les objectifs pédagogiques. Par contre, 31,6 % de sujets pensent le contraire.

3.1.2. Deuxième thème : Prestation des enseignants

Ce thème de l'échelle est constitué de cinq items (6, 10,11, 12 et 13). Les réactions de nos sujets à ces items sont présentées dans le tableau suivant.

Tableau 2

Questions	Degré D'appréciation				Total
	TD	D	A	TA	
6. Dans leurs enseignements, les professeurs de chaque cours démontrent l'importance de son cours pour votre formation.	8 (7,0%)	34 (29,8%)	59 (51,8%)	13 (11,4%)	114 (100%)
10. Les professeurs reprennent volontiers l'explication des notions ou matières difficiles.	9 (7,9%)	25 (21,9%)	53 (46,5%)	27 (23,7%)	114 (100%)
11. Les consignes proposées par les enseignants lors des exercices pratiques traduisent le souci de ces derniers à voir les étudiants progresser dans l'acquisition des compétences.	13 (11,4%)	23 (20,2%)	58 (50,9%)	20 (17,5%)	114 (100%)
12. Les enseignants dans ses interventions savent susciter l'intérêt de ses étudiants.	11 (9,6%)	25 (21,9%)	57 (50,0%)	21 (18,5%)	114 (100%)
13. Pendant les séances d'enseignement, les professeurs traitent les étudiants avec respect pendant leurs interventions.	14 (12,3%)	23 (20,2%)	51 (44,7%)	26 (22,8%)	114 (100%)

Légende: TD - Totalemment en Désaccord, D - En désaccord, A - en Accord et TA - Totalemment en Accord.

Il ressort de la lecture du Tableau n°2 que 63,2 % de sujets, à des degrés différents, affirment que leurs professeurs, pendant les enseignements, démontrent l'importance des cours pour leur formation contre 36,8% de sujets qui ont un avis contraire. En plus, 70,2% de sujets affirment que leurs enseignants reprennent volontiers l'explication des notions ou matières difficiles contre 29,8 % de sujets qui ont un avis contraire. On constate également que 68,4% de sujets, à des niveaux différents, pensent que les consignes proposées par les enseignants lors des exercices pratiques traduisent le souci de ces derniers à voir les étudiants progresser dans l'acquisition des compétences contre 31,6% de sujets qui ont un avis contraire.

Du même tableau, on constate que 68,5 % d'enquêtés affirment que leurs enseignants savent susciter l'intérêt des étudiants dans leurs interventions contre 31,5 % de sujets qui ont un point de vue contraire. Enfin, il ressort du même tableau que 67,5% de sujets, à des degrés différents, affirment que pendant les séances d'enseignement, les professeurs traitent les étudiants avec respect contre 32,5% de sujets qui ont un avis contraire.

3.1.3. Troisième thème : Evaluation des apprentissages

Ce thème de l'échelle est constitué de six items (14, 15, 16, 17, 18 et 19). Les réactions de nos sujets à ces questions sont présentées dans les lignes qui suivent.

Tableau 3

Résultats liés à l'évaluation des apprentissages

Questions	Degré D'appréciation				Total
	TD	D	A	TA	
14. Les examens (première et deuxième session), les travaux pratiques et les interrogations évaluent la compréhension des notions importantes traitées dans le cours.	17 (14,9%)	24 (21,0%)	50 (43,9%)	23 (20,2%)	114 (100%)
15. Les questions des travaux pratiques, interrogations et examens sont formulées clairement.	13 (11,4%)	27 (23,7%)	50 (43,9%)	24 (21,0%)	114 (100%)
16. Les travaux pratiques des cours proposent la résolution de problèmes réels ou de situations concrètes.	14 (12,3%)	28 (24,6%)	51 (44,7%)	21 (18,4%)	114 (100%)
17. Les directives pour la réalisation des travaux pratiques des cours issus de l'enseignement modulaire sont clairement expliquées par les enseignants.	21 (18,4%)	27 (23,7%)	42 (36,9%)	24 (21,0%)	114 (100%)
18. La supervision des professeurs titulaires des cours pendant la réalisation des travaux aide les étudiants à surmonter les difficultés.	18 (15,8%)	33 (28,9%)	34 (29,8%)	29 (25,5%)	114 (100%)
19. Les questions d'évaluations sont en rapport avec le contenu et les objectifs des cours.	19 (16,7%)	30 (26,3%)	38 (33,7%)	27 (23,7%)	114 (100%)

Légende: TD - Totalemment en Désaccord, D - En désaccord, A - en Accord et TA - Totalemment en Accord.

La lecture du Tableau n° 3 révèle que 64,1% de sujets, à des degrés différents, affirment que les examens, les travaux pratiques et les interrogations évaluent effectivement les notions importantes abordées dans les cours, alors que 35,9 % de sujets qui ont un avis contraire. En plus, 64,9 % de sujets, avec des nuances, affirment que les questions des travaux pratiques, interrogations et examens sont formulées clairement contre 35,1 % de sujets qui ont un avis différent. Ce même tableau indique que 63,1% de sujets, avec différentes nuances, affirment que les travaux pratiques de différents cours suivis à l'Université se proposent de résoudre les problèmes réels ou de situations concrètes contre 36,9 % de sujets qui ont un avis contraire.

Du même tableau, il ressort que 57,9% de sujets, avec des nuances, affirment que les directives pour la réalisation des travaux pratiques des cours suivis à l'Université sont clairement expliquées par les enseignants contre 42,1 % de sujets qui ont un avis contraire. On constate également que 55,3 % de sujets, à des degrés différents, affirment que la supervision des professeurs titulaires des cours pendant la réalisation des travaux aide les étudiants à surmonter les difficultés contre 44,7 % de sujets qui ont un point de vue contraire. Enfin, 57,4% de sujets, à des degrés différents, affirment que les questions des évaluations sont en rapport avec les contenus et les objectifs des cours contre 42,6 % de sujets qui ont un avis contraire.

3.1.4. Quatrième thème : Maîtrise de la matière des enseignants

Ce thème de l'échelle est constitué de deux items (20 et 21). Les réactions de nos sujets à ces items sont présentées dans le tableau suivant.

Tableau 4

Questions	RÉSULTATS LIÉS À LA MAÎTRISE DE LA MATIÈRE DES ENSEIGNANTS				Total
	DEGRE D'APPRECIATION				
	TD	D	A	TA	
20. Les enseignants font preuve d'une maîtrise des matières pendant l'enseignement de leurs cours.	20 (17,5%)	29 (25,5%)	38 (33,3%)	27 (23,7%)	114 (100%)
21. Les explications des enseignants pendant les séances des cours démontrent qu'ils ont beaucoup de connaissance dans leurs domaines.	19 (16,7%)	27 (23,7%)	33 (28,9%)	35 (30,7%)	114 (100%)

Légende: TD - Totalemment en Désaccord, D - En désaccord, A - en Accord et TA - Totalemment en Accord.

Il ressort de la lecture du Tableau n° 4 que 57 % de sujets, à des degrés différents, affirment que leurs enseignants font preuve d'une maîtrise des matières pendant les enseignements des cours contre 43 % de sujets qui ont un avis contraire. Du même tableau, on constate que 59,6 % de sujets, à des degrés différents, affirment que les explications des enseignants pendant les séances des cours démontrent qu'ils ont beaucoup de connaissance dans des domaines enseignés contre 41,4 % de sujets qui ont un avis différent.

3.2. Analyse différentielle des résultats

Pour effectuer cette analyse, nous avons ciblé une question pour chaque thème de l'échelle. Au niveau de la qualité de la planification de l'enseignement, les résultats obtenus attestent l'effet de la variable département («Question 1»: chi-carré = 3,64, p «0,02» >0,05). Cette variable est également l'unique à avoir influencé la perception de la prestation des

enseignants («Question 10»: $\chi^2 = 2,11$, $p < 0,01$) $> 0,05$). S'agissant de l'évaluation des apprentissages, les résultats de l'étude révèlent l'effet particulier de la variable département («Question 14»: $\chi^2 = 13,2$, $p < 0,04$) $> 0,05$). Enfin, au niveau de la maîtrise de la matière des enseignants, les résultats attestent l'effet de la variable département («Question 20»: $\chi^2 = 1,72$, $p < 0,00$) $> 0,05$). On peut donc conclure que seule la variable département a influencé de façon significative l'évaluation de la qualité de l'enseignement chez les étudiants enquêtés.

4. Discussion des résultats

Les résultats de l'étude indiquent, globalement, que les sujets de l'étude ont évalué positivement la qualité de l'enseignement dispensé à la Faculté de Psychologie et des Sciences de l'éducation (de l'Université de Kinshasa). En ce qui concerne la qualité de la planification des enseignements, les sujets de l'étude indiquent que les différents enseignements reçus depuis qu'ils sont à l'Université sont bien planifiés par les enseignants et cette préparation ne souffre d'aucune insuffisance. Cette conclusion se justifie par le fait que tous les indicateurs de cette thématique sont évalués positivement par les sujets de l'étude. Il s'agit, à titre de rappel, des indicateurs suivants : (1) la capacité du plan des cours à indiquer clairement le déroulement des leçons, (2) la formulation claire des objectifs pédagogiques et leur exposition par les enseignants, (3) l'explication claire par les enseignants des modalités d'évaluation des travaux pratiques, interrogations et examens, (4) la clarté des contenus des syllabus, (5) le respect des plans des cours, (6) l'atteinte effective des objectifs pédagogiques à l'issue des enseignements et (7) l'adéquation des contenus des cours avec les objectifs pédagogiques.

Ce constat de la bonne planification des enseignements a été également fait par Makinisi [7] en rapport avec la planification des cours de Méthodes de Créativité et Innovation. S'agissant de la prestation des enseignants, nos résultats indiquent que, pour les sujets de l'étude, leurs enseignants présentent bien et se montrent en mesure de donner de bons résultats chez les étudiants. Cette conclusion se justifie par le fait que tous les indicateurs de la prestation sont évalués positivement par les sujets enquêtés. Il s'agit de: (1) la capacité des enseignants à démontrer l'importance des cours pour la formation des étudiants, (2) la capacité des enseignants à donner des consignes pouvant amener les étudiants progresser dans la mobilisation des compétences, (3) la capacité des enseignants à susciter l'intérêt des étudiants dans leurs enseignements, (4) la capacité des enseignants à traiter les étudiants avec respect pendant les enseignements et (5) la possibilité des enseignants à reprendre les explications des notions difficiles.

On peut déduire que les enseignants de la faculté de psychologie et des sciences de l'éducation de l'Université de Kinshasa font preuve des qualités de bons enseignants. Ces fortes qualités peuvent se justifier par le fait que ces enseignants sont dans la faculté chargée d'apprendre aux autres facultés comment enseigner et transmettre les matières. Ils sont donc des spécialistes du processus d'enseignement-apprentissage, et à ce titre, ils ne peuvent qu'être bien appréciés par les étudiants. Ces résultats vont de pair avec ceux de Kibala [9] où il a été constaté que les professeurs de l'Université de Kinshasa avaient des qualités pédagogiques de bons enseignants.

En ce qui concerne l'évaluation des apprentissages, nos résultats indiquent que les évaluations à la Faculté de Psychologie et des Sciences de l'Éducation de l'Université de Kinshasa respectent les normes docimologiques. En effet, tous les indicateurs de cette thématique sont évalués positivement par les sujets de l'étude. Il s'agit de : (1) la capacité

des enseignants à aborder que des matières enseignées dans leurs évaluations, (2) la clarté des questions des évaluations, (3) la capacité des enseignants à donner des travaux pratiques qui se proposent de résoudre les problèmes réels, (4) la capacité des enseignants à donner des directives claires pour la réalisation des travaux pratiques, (5) la capacité des enseignants à bien superviser les travaux des étudiants et (6) la capacité des enseignants à donner des questions d'évaluations liées au contenu et aux objectifs des cours.

Ces résultats indiquent que les évaluations des cours sont objectives et ne souffrent d'aucune irrégularité documentaire. Ces résultats remettent en question ceux de plusieurs études [10,11] où il a été révélé une subjectivité notoire des évaluations académiques dans les universités congolaises. Nos résultats vont de pair avec ceux de Kibala [9] où il a été constaté que les évaluations à la Faculté de Psychologie et des Sciences de l'éducation sont perçues comme étant objectives par les étudiants.

S'agissant de la maîtrise de la matière des enseignants, nos résultats indiquent que les sujets de notre étude ont une perception positive de cette dimension. En effet, les deux indicateurs de cette dimension sont positivement évalués par les sujets de l'étude. Il s'agit de la maîtrise des matières à enseigner et de la capacité des enseignants à donner des explications démontrant leur forte maîtrise du cours. Ces résultats nous poussent à confirmer notre première hypothèse selon laquelle les étudiants de l'Université de Kinshasa auraient une appréciation positive de la qualité de l'enseignement dont ils sont bénéficiaires.

L'analyse différentielle a révélé que seule la variable département a influencé les résultats de l'étude. On peut ainsi lire la perception positive des étudiants des sciences de l'étudiant comparativement à ceux d'autres départements. Cette perception plus positive se justifie par le fait que ces étudiants sont initiés dans leurs différents modules de formation à l'appréciation des leçons. Ainsi, ils ont de fortes bases pour bien évaluer la qualité des enseignants. La non-influence des variables sexe, âge et promotion remet en question la conclusion de plusieurs études [12-15] selon laquelle la perception d'un fait social est fonction des variables sociodémographiques. Ainsi, nous infirmons partiellement et à 75 % notre deuxième hypothèse selon laquelle les variables sociodémographiques telles que l'âge, le sexe, la promotion et le département influeraient sur l'appréciation des étudiants de la qualité de l'enseignement suivi.

5. Conclusions

Cette étude a porté sur l'évaluation des étudiants de l'Université de Kinshasa de la qualité de l'enseignement. Elle avait pour objectif de fournir des appréciations des étudiants relatives à la qualité de la planification de l'enseignement, à la prestation des enseignants, à l'évaluation des apprentissages et à la maîtrise de la matière des enseignants. Pour ce faire, une échelle d'évaluation de la qualité de l'enseignement a été administrée à un échantillon peu représentatif de 114 étudiants de la faculté de Psychologie et des Sciences de l'Éducation de l'Université de Kinshasa. Les résultats obtenus révèlent que les sujets enquêtés affirment que leurs enseignants ont de bonnes capacités de planification de l'enseignement et font preuve d'une bonne prestation lors de leurs enseignements. En plus, les enseignants de cette faculté respectent les principes documentaires lors des évaluations des apprentissages et ont une réelle maîtrise des matières qu'ils enseignent. Ainsi, on peut conclure que la qualité de l'enseignement est bonne à l'Université de Kinshasa (précisément à la Faculté de Psychologie et des Sciences de l'Éducation). Cette bonne qualité de l'enseignement est un indicateur de l'atteinte des objectifs éducationnels de l'Université de Kinshasa relatifs à la transformation intellectuelle et cognitive des apprenants. Cette étude plaide ainsi en faveur

d'une généralisation de la politique de l'évaluation des enseignants par les étudiants afin de permettre aux animateurs des cours d'avoir un feedback sur leurs pratiques d'enseignement. Ce feedback est important pour permettre à ces enseignants d'améliorer leurs méthodologies d'enseignement.

Conflits d'intérêt: Il n'y a aucun conflit d'intérêt

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Citation: Banza Nsomwe-A-Nfunkwa E, Enguta Mwenzi J. Student evaluation of teaching quality at the University of Kinshasa. *Journal of Social Sciences.* 2023, 6 (3), pp. 141-150. [https://doi.org/10.52326/jss.utm.2023.6\(3\).10](https://doi.org/10.52326/jss.utm.2023.6(3).10).

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Submission of manuscripts:

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[https://doi.org/10.52326/jss.utm.2023.6\(3\).12](https://doi.org/10.52326/jss.utm.2023.6(3).12)
UDC 159.92:004:343(669)



PERSONALITY TRAITS, AGGRESSION, AND GENDER AS PREDICTORS OF CYBERBULLYING BEHAVIOR AMONG YOUTHS IN IBADAN METROPOLIS, NIGERIA

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Received: 07. 26. 2023

Accepted: 08. 22. 2023

Abstract. The prevalence of cyberbullying and associated psychological problems on the victims has been on the increase, especially in the developing countries. While studies on the effects of cyberbullying and management of the victims have been done in developed countries, this is not the case in many developing countries. Therefore, this study investigated predictors of cyberbullying behavior among youths in Ibadan metropolis, Nigeria. Cross-sectional survey design was adopted while purposive sampling technique was used to select the two institutions. Data was collected from 416 students using three validated scales. Two hypotheses were tested using stepwise multiple regression analysis and t-test of independent samples. Results indicated that personality traits significantly predicted cyberbullying behavior among students in the two tertiary institutions. When aggression was introduced into the model, there was an additional amount of variance explained. Furthermore, the result revealed that male students reported higher cyberbullying behavior than female students. The study concluded that personality traits of extraversion, openness to experience, conscientiousness, neuroticism, and aggression are important predictors of cyberbullying behavior among students in the study population. The study recommended that discouraging cyberbullying would be achieved by understanding the personality traits and aggressive behavior that triggers students into cyberbullying.

Keywords: *agreeableness, conscientiousness, extraversion, general strain theory, neuroticism, open to experience, social-ecological theory.*

Rezumat. Prevalența hărțuirii cibernetice și a problemelor psihologice asociate asupra victimelor a fost în creștere, în special în țările în curs de dezvoltare. În timp ce studiile privind efectele hărțuirii cibernetice și ale managementului victimelor au fost realizate în țările dezvoltate, acest lucru nu este cazul în multe țări în curs de dezvoltare. Prin urmare, acest studiu a investigat predictorii comportamentului de hărțuire cibernetică în rândul tinerilor din metropola Ibadan, Nigeria. A fost adoptat un design de anchetă transversală, în timp ce tehnica de eșantionare intenționată a fost utilizată pentru a selecta cele două instituții.

Datele au fost colectate de la 416 studenți folosind trei scale validate. Două ipoteze au fost testate utilizând analiza de regresie multiplă treptată și testul t al probelor independente. Rezultatele au indicat că trăsăturile de personalitate au prezis în mod semnificativ comportamentul de hărțuire cibernetică în rândul studenților din cele două instituții terțiare. Când agresivitatea a fost introdusă în model, a existat o cantitate suplimentară de varianță explicată. În plus, rezultatul a arătat că studenții de sex masculin au raportat un comportament de hărțuire cibernetică mai mare decât studenții. Studiul a concluzionat că trăsăturile de personalitate de extraversie, deschiderea către experiență, conștiințiozitatea, nevroticismul și agresivitatea sunt predictorii importanți ai comportamentului de hărțuire cibernetică în rândul studenților din populația studiată. Studiul a recomandat ca descurajarea hărțuirii cibernetice să fie obținută prin înțelegerea trăsăturilor de personalitate și a comportamentului agresiv care îi determină pe elevi să devină hărțuiți.

Cuvinte cheie: *agreesibilitate, conștiințiozitate, extraversie, teoria generală a tensiunii, nevrotism, deschidere către experiență, teorie social-ecologică.*

1. Introduction

The advent of the Internet has provided human beings with several possibilities than before to have access to information, education, games, and social interactions at any given time and place by simply using a phone or computer and being online. These possibilities are considered advantageous for most people today because it allows individuals to have access to information at a much faster rate compared to what was available in the past decades. However, despite the wide range of these opportunities the Internet offered, it has led to serious abuse. One covert area of abuse is in cyberbullying behavior [1].

Cyberbullying has to do with intentional and repeated harm of individuals through the use of computers, phones, and other electronic devices by cyberbullies [1]. It is when an individual teases, threatens, humiliates, or taunts another person through means of electronic devices or the Internet. Definitions of cyberbullying identified three components namely intention to harm, imbalance of power and repeated action on a specific target. Cyberbullying behavior includes impersonation, harassment, inappropriate photographs, and website creation like blog or poll to harass others [2]. Cyberbullying has become a problem that warrants serious attention within society because of the significant threat it poses to psychological and physical health especially among youths [3].

Personality traits are considered in this study as likely a predictor of cyberbullying behavior. It is described as the relative stable behavioral pattern of an individual over time [4]. The five structure personality traits of extraversion, conscientiousness, agreeableness, open to experience and neuroticism have been used to explain individual behavior [5]. Extraversion is characterised by the way an individual behaves in social activity, their assertive nature, and the level of energy possessed. Individuals high in extraversion score enjoy socialising with other people, they are usually comfortable expressing themselves in group situations, and experience positive emotions that include excitement. On the other hand, introverts tend to be socially and emotionally reserved [6]. Extraversion does not lead to aggression and by extension cyberbullying behavior [7].

Agreeableness refers to the qualities of compassionate, respectfulness, and acceptance of others. Individuals with this quality are concerned for others' well-being, they respect others rights and likes, and have positive emotions toward others. Individuals with disagreeable trait have less regard for others and lack social norms of politeness. Individuals

who score low in agreeableness are most likely to display cyberbullying behavior. Studies have found agreeableness to independently predict cyberbullying behavior [7-9].

Openness to experience relates to individuals' intellectual curiosity, their aesthetic sensitivity, and how imaginative they are. An openness minded individual enjoys thinking and learning, and love beauty and art, have original ideas. A closed-minded individual tends to have a narrow range of intellectual and creative interests. Openness to experience is a trigger to aggression. Individuals who score low on openness to experience are more likely to be frustrated. Studies have confirmed openness to experience as a strong predictor of cyberbullying behavior [7-9].

Conscientiousness explains individual levels of organisation, productivity, and responsiveness. Individuals with this trait like orderliness and follow structure, they are persistent in pursuing their goals as well as committed to fulfilling assigned duties and obligations. Individual lows in this trait are comfortable with disorder and are less motivated to complete tasks. Volk et al. [10] found conscientiousness to be a significant predictor of cyberbullying behavior.

Neuroticism reveals individuals' frequency and intensity of showing negative emotions. Individuals who score high in neuroticism are prone to experience anxiety, sadness, and mood swings. When compared to individuals who are emotionally stable, they show calmness and resilience even when they are passing through difficult challenges. Neuroticism causes aggression and frustration and would lead to violent behavior including cyberbullying. Neuroticism has been found to predict cyberbullying behavior [7, 11]. Generally, Xu and Zheng [12] found conscientiousness, agreeableness, and openness to experience to significantly predict cyberbullying among their study participants.

In addition to personality traits, aggression has also been implicated as a predictor of cyberbullying. Aggression is any behavior directed to another individual with the intention to cause harm to that individual [13]. Previous studies have found aggression to significantly predict cyberbullying behavior [14, 15]. Higher scores on aggression scale would lead to higher level of cyberbullying behavior with the motives to harm others, revenge, dominate or for entertainment [16]. Another study has confirmed that individuals with aggressive behavior would seek every opportunity to display aggression including cyberbullying behavior [15]. It has been empirically confirmed that cyberbullies used cyberspace as their readily available platform to display their aggressions on potential victims [3, 17].

It is pertinent to state that aggressive behaviors by the cyberbullies are not limited to time and space. They bully their victims whenever and wherever they are online. Also, aggressive cyber bullies have used cyberbullying as a means to satisfy their feelings of revenge towards their former bullies in face-to-face and/or in cyber interactions [18]. Extending this argument further, aggressive individuals may use revenge to overcome frustrations. Salmon et al. [19] reported that vengefulness is a common trait of cyberbullies as they may not have the platform to bully those who have previously victimised them. Aggressively inclined individuals view social interactions as important ways to dominate others and establish power and status in a way to earn other respects [2]. By acting aggressively, cyberbullies dominate others in cyberspace [19].

Another factor considered in this study as likely to influence cyberbullying behavior is the gender of the individual. Studies that determined whether male youths are more into cyberbullying behavior compared to female youths found that males are more involved in direct physical and verbal cyberbullying behavior than their female counterparts [15, 16].

Also, females were found to use indirect forms of aggression to a greater extent especially when the victims are not known by the peer group and when the individuals' personal and social reputations are attacked [10]. This means that direct cyberbullying behavior is more typical of the male gender, while indirect cyberbullying behavior is more typical of the female gender. Xu and Zheng [12] confirmed that gender moderates between agreeableness and cyberbullying and then openness to experience and cyberbullying.

Taking into consideration the prevalence of cyberbullying and mental and psychological problems on the victims of cyberbullying and the health sectors, it is imperative to investigate some factors that would predict cyberbullying behavior among the vibrant population in the society. Therefore, the main purpose of this study was to examine whether personality traits, aggression and gender would predict cyberbullying behavior among youths in Ibadan metropolis, Nigeria. The specific objectives of this study were: (1) to determine whether personality traits and aggression would jointly and independently predict cyberbullying behavior among youths in Ibadan metropolis, and (2) to find out whether male students would show significant difference in cyberbullying behavior than female students.

The result of this study would identify factors that predict students engaging in cyberbullying behavior. These predictors: personality traits, aggression, and gender would guide in the design of interventions to reduce cyberbullying behavior among youths. Second, findings of this study would be useful to researchers, parents, teachers, school administrators, individuals, psychologists, and students as this would provide insights into the psychological and demographic profile of cyberbullying perpetrators. Finally, the information generated in this study would be used to organise seminars to educate youths on how to prevent cyberbullying before it occurs.

2. Theoretical concepts

2.1 Social-Ecological Theory

This theory posits that children and adolescents' behavior are determined by many different complex systems such as the family, peers and the school environments [20]. The first direct contact of a child in the social environment is the family, peers and the school which is called the micro-system. When a child's behavior is influenced by the family or the school climate, this level of interaction is called the meso-system. A good example is the parent-teacher forum in the school environment. The next level of interaction is the macro-system which comprises the societal laws.

Finally, when the dimension of time is included in the system, it is known as the 'chronosystem'. The 'chronosystem' has a direct influence on the child's behavior through external or internal events. Therefore, it is the event caused by 'chronosystem' that has a direct effect on the micro-, meso-, and macro-systems of the child's behavior. When applied to this study, cyberbullying would be the 'chronosystem' which indirectly influences the cyberbullies and the victims' experience because of the increase in social network sites and the affordability of cyberspace for social interactions.

Espelege [20] has used social-ecological framework to examine predictors of cyberbullying behavior including hostility and alcohol and other drug abuse (AOD) among 1,023 adolescents (5th- 8th grade).

The result showed that hostility and AOD mediated the relationships between family conflicts and cyberbullying behavior. Further analysis revealed that cyberbullying behavior explained individual and family characteristics.

2.2 General Strain Theory

This is the second theory used in this study to explain cyberbullying behavior. According to this theory, individuals who experienced high levels of stress would develop anger and frustration and this would increase the individual's risk factor to engage in deviant behavior [21] such as cyberbullying behavior. Because of the pressure exerted on the individuals to achieve socially acceptable goals, individuals are forced to commit crimes such as selling drugs and using or participating in illegal acts to gain financial security. When apply to cyberbullying behavior, it means that youths who have experienced victimisation at home, school and the larger society tend to engage in cyberbullying behavior in order to compensate for their anger and frustration [22].

Hypotheses:

H1 Personality traits and aggression would jointly and independently predict cyberbullying behavior among youths in Ibadan metropolis.

H2 Male students would show a significant difference in cyberbullying behavior than female students.

3. Materials and Methods

3.1. Design

The study adopted cross-sectional survey design. The independent variables were personality traits and aggression while the dependent variable was cyberbullying behavior.

3.2. Settings

This research was carried out among youths in Ibadan metropolis in Ibadan North Local Government Area in Ibadan, Nigeria. This metropolis was selected because it has a high population of youths in which cyber bully perpetrators and victims are likely to be found.

3.3. Population

Ibadan North Local Government Area is made of 1,047,497 youths' population according to Population Projection conducted on 21st of March 2016 (reference.citypopulation.com). The study focused on youths ranging from 19 to 30 years of age in Ibadan North Local Government Area. The age range selected was because they have a large possibility to be cyberbullying perpetrators. The population focused on perpetrators not the victims.

3.4. Sample Determination and Sampling Technique

The Taro Yamane formula (Eq.1) was used to calculate the sample size from the population of 1,047,497 youths:

$$n = \frac{N}{1 + N(e)^2} \quad (1)$$

where: n - sample size required; N - population; e - allowable error ($P1=P2=0.5$). Therefore, 440 participants were selected for the study.

Purposive sampling technique was used to select the Ibadan North Local Government Area and convenience sampling technique was used to youths for the distribution of the research instrument to the participants.

3.5. Instruments

Three instruments were used for data collection.

3.5.1. Cyberbullying

This was measured using the Cyberbullying Scale developed by Cetin et al. [23]. The scale consists of 10- item that measure perpetration of cyberbullying. The scale is presented on a 5-point Likert's format ranging from Many times =5, Several times = 4, Occasionally = 3, Rarely = 2, and Never =1. Sample items include: "I have called someone's cell phone and hung up to bother or frighten him/her" and "I have pretended to be someone else so I could say or do bad things on the Internet". The author's reported the scale Cronbach's alpha of 0.89. In this study, Cronbach's alpha was 0.86.

3.5.2. Aggression

This was assessed using the Aggression Questionnaire (AGQ) developed by Buss and Perry [24]. Questionnaire (AGQ) measures the four major components of aggression (Physical aggression, Verbal aggression, Anger and Hostility). It is a 29-item scale which is rated on a 5-point Likert's format from Never (0), Rarely (1), Sometimes (2), Often (3), Always (4). In this study, the 11-item brief form was used. Sample items include: "I tease students to make them angry" and "I am angry most of the day". The authors' reported Cronbach's alpha of 0.87. In the present study, Cronbach's alpha was 0.83.

3.5.3. Personality Traits

This was determined by using a 10-item Personality Inventory (BFI) developed by Rammstedt and John [25] which is a self-reported scale that measures the big five personality traits. The scale is presented on a 5-point Likert's format ranges from Strongly agree =5, Agree = 4, Undecided = 3, Disagree = 3, Strongly disagree = 1. Sample items include: "I see myself as someone who is reserved" and "I see myself as someone who is relaxed, handles stress well". The authors reported the scale Cronbach's alpha of 0.75 while the current Cronbach's alpha was 0.72.

3.6. Procedure

The researchers collected a Letter of Introduction from the Department of Psychology, University of Ibadan which was presented to the potential participants. Potential participants were told the purpose of the study and asked for their consent to participate in the study. Individuals who agreed to participate in the study were given questionnaires to complete which took less than 18 minutes. A total of 440 questionnaires were distributed in the course of data collection of which 429 were retrieved (i.e.,97% response rate). Thirteen questionnaires had missing data which were removed leaving with 416 questionnaires used for the analysis.

3.7. Data Analysis

Data collected was analysed using SPSS version 23. Hypothesis 1 was tested using stepwise multiple regression analysis while hypothesis 2 was tested using t-test of independent samples. All hypotheses were accepted at a $p < 0.05$ level of significance.

4. Results

Descriptive analysis revealed that 222 (53%) of the participants were males while 194 (47%) were females. The age bracket of the participants indicated that 120 (29%) were less

than 20 years of age, 201 (48%) were between 20- and 24-years age bracket, 86 (21%) were between 25- and 29-years age bracket while 9 (2%) of the participants were 30 years and above. In terms of their level of education, 96 (23%) were pursuing OND, 102 (25%) were in their HND programmes while 218 (52%) of the participants were in their BSc programmes. When asked of their religious affiliations, 220 (53%) claimed to be Christians, 190 (45%) claimed to be Muslims, while 9 (2%) did not indicate their religious affiliations.

H1. Personality traits and aggression would jointly and independently predict cyberbullying among youths in Ibadan metropolis. This was tested with stepwise multiple regression analysis and the result is presented in Table 1.

Table 1

Hierarchical regression analysis of personality traits, aggression, and cyberbullying behavior among youths in Ibadan metropolis, Nigeria

Model Summary

Model	R	R ²	Adjusted R ²	Standard Error of the Estimate
1	0.401 ^a	0.160	0.160	0.16214

^a Predictors: (Constant), extraversion, agreeableness, openness to experience, conscientiousness, neuroticism.

Note: R= Regression relationship, R² = R-square

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.*
1	Regression	13289.396	5	2657.879	9.847	0.000
	Residual	249.423	411	0.607		
	Total	13538.819	416			

^aDependent Variable: cyber bullying behavior. Predictors: (constant), extraversion, agreeableness, openness to experience, conscientiousness, neuroticism.

Note: df - degree of freedom, F - Fisher's ratio, Sig. - Significance level.*p<0.05

Coefficients ^a

Model	Unstandardized Coefficient		Standardised. coefficient	t	Sig.*
	B	Std. Error	Beta(β)		
(Constant)	1.804	0.172		9.424	0.000
Extraversion	0.160	0.012	0.327	4.391	0.000
Agreeableness	-0.066	0.013	-0.102	-1.606	0.060
Openness	- 0.154	0.022	-0.213	-4.614	0.000
Conscientiousness	0.148	0.019	0.297	3.047	0.000
Neuroticism	0.057	0.023	0.198	2.962	0.000

^a Dependent variable: Cyber bullying behavior.

Note: t - t-statistic value;Sig. - Significance level; *p<0.05

Results in Table 1 revealed that personality traits of extroversion, agreeableness, openness to experience, conscientiousness and neuroticism significantly predicted cyberbullying (R² = 0.160, F (5,411) =9.847, p < 0.05). This infers that extroversion, agreeableness, openness to experience, conscientiousness, and neuroticism account for 16% of variance observed in cyberbullying behavior among the study participants. The results further revealed that extraversion (β = 0.324, t = 4.391, p < 0.05), openness to experience

($\beta = -0.213$, $t = -4.614$, $p < 0.05$), conscientiousness ($\beta = 0.297$, $t = 3.047$, $p < 0.05$), and neuroticism ($\beta = 0.198$, $t = 2.962$, $p < 0.05$) independently predicted cyberbullying behavior.

Table 2

Hierarchical regression analysis of personality traits, aggression and cyberbullying behavior among youths in Ibadan metropolis, Nigeria

Model Summary

Model	R	R ²	Adjusted R ²	Standard Error of the Estimate
2	0.492 ^a	0.242	0.082	0.03561

^a Predictors: (Constant), extraversion, agreeableness, openness to experience, conscientiousness, neuroticism, aggression.

ANOVA^a

Model		Sum of Squares	Df	Mean Square	F	Sig.*
2	Regression	12146.296	6	2024.383	12,906	0.000
	Residual	298.478	410	0.728		
	Total	12444.774	416			

^aDependent Variable: Cyber bullying behavior; Predictors: (constant), extraversion, agreeableness, openness to experience, conscientiousness, neuroticism coefficients.

Coefficients

Model 2	Unstandardized Coefficients		Standardized Coefficients		Sig.*
	B	Standard Errors	Beta(β)	t	
Constant	1.782	0.157		8.735	0.000
Extraversion	0.161	0.014	0.312	4.173	0.000
Agreeableness	-0.052	0.011	-0.096	-1.072	0.071
Openness	-0.146	0.029	-0.216	-4.761	0.000
Conscientiousness	0.138	0.015	0.291	3.744	0.000
Neuroticism	0.061	0.012	0.090	1.850	0.330
Aggression	0.063	0.021	0.393	5.182	0.000

^a Dependent variable: Cyber bullying behavior.

Note: t - t-statistic value; Sig. - Significance level; F - Fisher's F ratio; * $p < 0.05$.

Table 2 shows independent predictors of cyberbullying behavior. The result in Table 2 revealed that when aggression was introduced into the model, there was increased in the variance explained. In other words, the introduction of aggression contributed a significant 8.2% to the variance observed in cyberbullying among students [F (3,413) = 3.277, $p < 0.05$, $R^2 = 0.082$]. Specifically, extraversion ($\beta = 0.312$, $t = 4.173$, $p < 0.05$), openness to experience ($\beta = -0.216$, $t = -4.761$, $p < 0.05$), conscientiousness ($\beta = 0.291$, $t = 3.744$, $p < 0.05$) and aggression ($\beta = 0.393$, $t = 5.182$, $p < 0.05$) independently predicted cyberbullying behavior among youths in Ibadan metropolis, Nigeria. Hence, the hypothesis was supported.

H2. Male students would show a significant difference in cyberbullying behavior than female students. This was tested using t-test for independent samples and the result is presented in Table 3.

Table 3

T-test for independent sample of gender influence on cyberbullying behavior among youths in Ibadan metropolis, Nigeria

Dependent	Gender	N	M	SD	t	df	p
CBB	Male	222	19.24	7.7	1.63	414	>0.05
	Female	194	18.95	7.9			

Note. CBB - Cyberbullying Behavior; N – Population; M – Mean, SD-Standard Deviation; t-t-statistic-value, df-Degree of freedom, p- value for the acceptance or rejection of the stated hypothesis. **Source:** Authors' field survey.

The result in Table 2 showed no significant gender difference in cyberbullying behavior among the study population [$t(414) = 1.63, p > 0.05$]. However, male students ($M = 19.24, SD = 7.7$) reported higher cyberbullying behavior than female students ($M = 18.95, SD = 7.9$). The hypothesis was partially supported.

5. Discussion

The study investigated personality traits, aggression, and gender as predictors of cyberbullying behavior among youths in Ibadan metropolis, Nigeria. Two hypotheses were generated and tested in the study. The results supported the hypothesis that personality traits of extroversion, agreeableness, openness to experience, conscientiousness and neuroticism would jointly predict cyberbullying behavior among youths in Ibadan metropolis. This accounted for 16% of the variance observed in cyberbullying behavior among the study participants. This result supported Xu and Zheng [12] finding that conscientiousness, agreeableness, and openness to experience were significant predictors of cyberbullying among their study participants.

When aggression was introduced into the regression model, the result reveals significant change in the joint prediction on cyberbullying behavior. Thus, personality traits and aggression significantly predicted cyberbullying behavior. In other words, the introduction of aggression contributed 8.2% to the variance observed in the cyberbullying behavior among students. Apparently, this study result demonstrated evidence that the personality traits of extroversion, openness to experience, conscientiousness and aggressiveness of perpetrators predict their action towards cyberbullying. These findings supported previous studies that personality traits and aggression significantly predicted cyberbullying behavior [7-9, 26]. Also, these findings equally supported studies that aggression is a significant predictor of cyberbullying behavior [14, 15]. Personality traits and aggression played important roles in flaming cyberbullying attacks on other online users. Furthermore, Saniel et al. [2] and Salmon et al. [19] confirmed that by behaving aggressively, cyberbullying perpetrators would dominate others in cyber settings.

According to the General Strain theory, bullying is one type of strain that increases the likelihood of involvement in crime and anti-social behaviors as a way to cope with the negative emotions that result from the stressor [21]. This means that higher level of aggression would be related to higher level of cyberbullying behavior all with the motives to harm others, revenge, dominate or for entertaining themselves. Individuals with aggressive behavior would ever seek for chances to act out their aggressive behaviors.

Although the hypothesis that male students would show significant difference in cyberbullying behavior than female students was not supported, a further observation of mean value reveals that male students reported higher in cyberbullying behavior than their

female counterparts. This finding supported previous studies that found that males were involved in direct forms of physical or verbal aggression than females [8, 16]. However, females have been reported to use indirect aggression where the victims are excluded from the peer group or where personal and social reputations are under attack [10]. These results supported the finding that direct aggression is more of the male gender while indirect aggression is more of the female gender [12].

6. Limitations of Study

Some limitations of this study need to be mentioned. Self-reported questionnaire was used for data collection which is not free from response bias. Further studies should use both qualitative and quantitative data collection methods to validate data collected. Another limitation identified in this study was that only two independent variables were investigated. Further studies should include self-esteem, loneliness and learned helplessness to explore cyberbullying behavior. Finally, since only youths in Ibadan metropolis were used in the present study, further studies should include more youths in other Local Government Areas in Oyo State to allow for wider generalisation of findings.

7. Conclusion

This study has empirically determined that personality traits of extroversion, agreeableness, openness to experience, conscientiousness, neuroticism, and aggression are strong predictors of cyberbullying behavior among students in the two tertiary institutions in Ibadan, Nigeria. Also, male students were found to be more into cyberbullying than their female counterparts. Therefore, it is recommended that discouraging cyberbullying behavior would be achieved by understanding the personality traits and aggressive behavior that triggers students into cyberbullying.

Conflicts of Interest: The authors declare no conflict of interest. Also, the study was self-sponsored by the authors.

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Citation: Uye, E. E.; Oluyemi, O. E.; Olapegba, P. O. Personality traits, aggression, and gender as predictors of cyberbullying behavior among youths in Ibadan metropolis, Nigeria. *Journal of Social Sciences*. 2023, 6 (3), pp. 151-161. [https://doi.org/10.52326/jss.utm.2023.6\(3\).12](https://doi.org/10.52326/jss.utm.2023.6(3).12).

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Submission of manuscripts:

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[https://doi.org/10.52326/jss.utm.2023.6\(3\).13](https://doi.org/10.52326/jss.utm.2023.6(3).13)
UDC 614.2:376.64:316.35:347.639-053.2(672.4



QUALITY OF LIFE OF CHILDREN IN CARE INSTITUTIONS IN KINSHASA AND ITS DETERMINANTS

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Received: 07. 28. 2023

Accepted: 08. 26. 2023

Abstract. The aim of this research was to assess the quality of life of children placed in foster care institutions in Kinshasa, and to identify its socio-demographic determinants. It also aimed to indirectly assess the effectiveness of comprehensive care for children placed in these institutions. Against this backdrop, the McGill Quality of Life Scale was administered to a sample of 210 children placed in five care institutions in Kinshasa. The results of the study showed that the children in care had a good general, psychological, physical, existential and social quality of life. Four socio-demographic variables had a decisive influence on the quality of life of these children. These were gender, length of stay at the center, age and type of deceased parent.

Keywords: *wellbeing, orphans and vulnerable children, orphanages, social placement, care.*

Résumé. L'objectif de cette recherche était d'évaluer la qualité de vie des enfants placés dans les institutions d'accueil de Kinshasa et d'identifier ses déterminants sociodémographiques. Elle avait aussi pour objectif d'apprécier indirectement l'efficacité de la prise en charge intégrale des enfants placés dans ces institutions. C'est dans ce contexte que l'échelle de McGill de la qualité de vie a été administrée à un échantillon de 210 enfants placés dans cinq institutions d'accueil de Kinshasa. Il ressort des résultats de l'étude que les enfants placés ont fait preuve d'une bonne qualité de vie générale, psychologique, physique, existentielle et sociale. Quatre variables sociodémographiques ont eu une influence déterminante sur la qualité de vie de ces enfants. Il s'agit du sexe, de la durée du séjour au centre, de l'âge et de la nature du parent décédé.

Mots-clés: *bien-être, orphelins et enfants vulnérables, orphelinats, placement social, prise en charge.*

Rezumat. Scopul acestei cercetări a fost de a evalua calitatea vieții copiilor plasați în instituții de plasament maternal din Kinshasa și de a identifica determinanții socio-demografici ai acesteia. De asemenea, a avut ca scop evaluarea indirectă a eficacității îngrijirii cuprinzătoare pentru copiii plasați în aceste instituții. În acest context, Scala McGill pentru calitatea vieții a fost administrată unui eșantion de 210 copii plasați în cinci instituții de îngrijire din Kinshasa. Conform rezultatelor studiului, copiii aflați în îngrijire au avut o bună calitate generală, psihologică, fizică, existențială și socială a vieții. Patru variabile socio-demografice au avut o

influență decisivă asupra calității vieții acestor copii. Acestea au fost sexul, durata aflării la centru, vârsta și tipul părintelui decedat.

Cuvinte cheie: *bunăstare, orfani și copii vulnerabili, orfelinate, plasament social, îngrijire.*

1. Introduction

De nos jours, les institutions d'accueil occupent une place de choix dans l'assistance et l'encadrement sociaux des enfants vulnérables. Elles font partie des mécanismes étatiques en matière de placement social avec pour objectif d'offrir aux enfants en situation difficile un milieu de vie satisfaisant leurs différents besoins vitaux. Plusieurs textes légaux nationaux et internationaux de protection de l'enfant exigent à ces institutions d'assurer à l'enfant placé un milieu de vie qui satisfait aux exigences d'un placement de qualité [1-3].

Ainsi, ces institutions se proposent d'améliorer la qualité de vie des enfants placés afin de faciliter leur réinsertion dans leur milieu naturel de vie. Dans ce contexte, l'évaluation de la qualité de vie de ces enfants permet également d'apprécier les répercussions de différentes activités proposées par ces structures dans le but de résoudre les différents problèmes rencontrés par ces derniers [4]. Par conséquent, une bonne qualité de vie devient un indicateur de l'efficacité de la prise en charge des institutions d'accueil des enfants et adolescents en situation difficile. D'où l'importance des études évaluant la qualité de vie des enfants hébergés dans les institutions d'accueil. Ce genre d'études a l'avantage de renseigner sur les dimensions de la prise en charge des enfants qui posent problème et de remédier aux différentes difficultés auxquelles ils font face. Cependant, ces études sont moins nombreuses, à travers le monde, et leurs résultats sont nettement plus mitigés. Quelques études réalisées en Australie, en Pologne et en France ont révélé que la qualité de vie des enfants placés est régulièrement abaissée, et cela, de façon globale et significative [5-8]. Si la satisfaction des enfants est mesurée bonne dans leur parcours de placement [9], certains facteurs d'état actuel ou d'anamnèse sont mis en avant comme facteur influençant spécifiquement la qualité de vie.

En République Démocratique du Congo (RDC), les études de viabilité des institutions d'accueil des enfants en situation difficile réalisées par le Ministère des Affaires Sociales [10,11] ont révélé des déficits importants dans l'encadrement et le suivi des enfants accueillis dans ces institutions. Ces déficits se traduisent par une mauvaise qualité de vie des enfants placés. Ces résultats peuvent se justifier par le fait que les institutions d'accueil des enfants en RDC, dans la plupart de cas, remplissent rarement les exigences d'un encadrement de qualité et offrent des services en dessous des normes ou de seuil minimal acceptable. D'ailleurs, ce sont ces déficits qui ont poussé l'Etat à édicter en 2013 des lignes de conduite (normes) en matière de protection de l'enfant.

Ces différentes études de viabilité ont permis aussi d'identifier quelques rares institutions d'accueil des enfants en situation difficile dont la qualité de la prise en charge est relativement bonne. Dans la liste de ces établissements, on peut citer : (1) le Centre d'accueil et de Réinsertion des Enfants la Bénédicte, (2) la Maison Enrica «Foyer de l'enfant Jésus» ; (3) le centre Secours à l'Enfant Congolais pour l'Avenir Meilleur, (4) le centre Encadrement aux Enfants Vulnérables, (5) le centre Liboso Muana et (6) le Centre Ndako Ya Biso [12]. Une étude réalisée auprès des enfants placés dans deux de ces centres (Liboso Muana et Benedicta) a permis de constater cette bonne prise en charge qui s'est manifestée par le développement d'un réel sentiment de bien-être chez les enfants placés [13]. Cette étude a eu quelques limites. En premier lieu, elle s'est basée sur un échantillon non-probabiliste et s'est limitée à deux institutions d'accueil. En second lieu, elle n'a pas pris en

compte certaines variables considérées dans la littérature [3] comme des déterminants importants de la qualité de vie des enfants placés (sexe, tranche d'âge, qualité de l'institution d'accueil, durée du séjour au centre, parent décédé et scolarité).

Cette recherche se propose, ainsi, de combler ces deux vides documentaires en appréciant la qualité de vie des enfants placés dans cinq institutions d'accueil de la ville de Kinshasa dans ses différentes dimensions. Ces établissements font partie des institutions qui offrent une prise en charge des enfants de meilleure qualité. Il est aussi question, dans cette étude, d'identifier les variables sociodémographiques influençant de manière particulière la qualité de vie de ces enfants.

2. Méthodologie

2.1. Cadre physique de l'étude

Le milieu d'investigation de cette recherche est constitué des institutions de placement social des enfants vulnérables de la ville-province de Kinshasa. Précisément, cinq établissements ont été ciblés dans cette recherche : (1) le Centre d'accueil et de Réinsertion des Enfants la Bénédicte « Care-Benedicta » ; (2) la Maison Enrica « Foyer de l'enfant Jésus » ; (3) le Centre Secours à l'Enfant Congolais pour l'Avenir Meilleur « SECAM » ; (4) le Centre Encadrement aux Enfants Vulnérables « EEV/EDEN » et (5) le Centre Ndako Ya Biso.

2.2. Participants à l'étude

L'effectif total des enfants placés dans les institutions d'accueil susmentionnées est de 474 sujets. De cette population, nous avons extrait un échantillon aléatoire simple de 210 enfants. Cet échantillon varie selon les facteurs sociodémographiques suivants : (1) l'institution d'accueil, (2) le sexe, (3) la tranche d'âge, (4) la durée du séjour au centre, (5) le parent décédé et (6) la scolarité. Selon l'institution d'accueil, l'échantillon comprend 61 enfants de la Maison Enrica, 53 du centre la Benedicta, 28 du SECAM, 44 du centre EEV et 24 de Ndako Ya Biso.

S'agissant du sexe, on a 122 garçons contre 88 filles. Du point de vue de la tranche d'âge, l'échantillon comprend 72 enfants âgés de 10-12 ans, 77 âgés de 13-15 ans et 61 âgés de 16-18 ans. Considérant la variable nature du parent décédé, on a 47 sujets orphelins de père, 43 orphelins de mère, 61 orphelins de tous les deux parents et 59 enfants non-orphelins (vulnérables). S'agissant de la durée de séjour à l'institution, on a 44 sujets ayant passé 0-2 ans au centre, 78 sujets 3-5 ans et 88 sujets plus de 5 ans au centre. Enfin, au niveau de la variable scolarité, on a 22 sujets sans niveau (analphabètes), 79 sujets du niveau primaire, 48 du niveau secondaire et 61 du niveau des humanités.

2.3. Instrument de récolte des données

L'échelle de la qualité de vie de McGill a été utilisée pour recueillir les données lors de notre enquête. Elle a été conçue par Cohen [14] et comprend 15 questions réparties en cinq sous-échelles liées aux aspects général, physique, psychologique, existentiel et social de la qualité de vie [14]. Quatre modalités de réponse sont prévues face aux items de l'échelle: (1) Totallement en Désaccord « TD », (2) Désaccord « D », (3) Accord « A » et (4) Totallement en Accord « TA ». Le test des qualités métrologiques a démontré une bonne consistance interne car les alphas de Cronbach de différentes dimensions de l'échelle se sont avérées supérieures au seuil d'acceptabilité de 0,70 (qualité de vie 0,86; qualité de vie psychologique 0,74; qualité de vie existentielle 0,65, qualité de vie sociale 0,86, ensemble de l'échelle 0,77).

La cotation de l'échelle a consisté à accorder les points 1, 2, 3 et 4 respectivement aux modalités TD, D, A et TA. Des notes moyennes des sujets à chaque dimension ont été dégagées. Dans cette même optique, une échelle d'étalonnage a été établie afin d'interpréter les notes moyennes des sujets. Cette échelle se présente comme suit : pire qualité de vie (1-1,4); mauvaise qualité de vie (1,5-2,4); bonne qualité de vie (2,5-3,4) et très bonne qualité de vie (3,5-4).

3. Résultats de l'étude

Nous présentons les résultats de l'étude en tenant compte de deux axes suivants : (1) les résultats globaux et (2) les déterminants de la qualité de vie des enfants placés.

3.1. Résultats globaux

Les réactions de nos sujets à l'échelle de la qualité de vie sont présentées dans le tableau suivant en fonction de quelques indices statistiques.

Tableau 1

Qualité de vie des enfants placés (N= 210)					
Notes Ind. Stat.	QVG	QVPh	QVPs	QVE	QVS
Moyenne (M)	2,57	2,59	2,51	2,73	2,61
Ecart – type (σ)	1,06	0,58	0,58	0,67	0,66
Variance(σ^2)	1,12	0,33	0,33	0,45	0,44

Légende: QVG - Qualité de Vie Générale; QVPh - Qualité de Vie Physique; QVPs - Qualité de Vie Psychologique; QVE - Qualité de Vie Existentielle; QVS - Qualité de Vie Sociale.

La lecture du tableau 1 révèle que les moyennes des enquêtés aux différentes sous-échelles de la qualité de vie (qualité de vie générale, qualité de vie physique, qualité de vie psychologique, qualité de vie existentielle et qualité de vie sociale) sont respectivement de: 2,57; 2,59; 2,51; 2,73 et 2,61. Ces moyennes traduisent, au niveau de l'étalonnage, une bonne qualité de vie. En d'autres termes, les sujets enquêtés font preuve d'une bonne qualité de vie générale, physique, psychologique, existentielle et sociale. Sous l'angle général, ces résultats révèlent que la qualité de vie des enfants placés s'est améliorée depuis qu'ils sont dans les institutions d'accueil. En d'autres termes, les différents problèmes quotidiens d'ordre physique, social, émotionnel et spirituel auxquels ils faisaient face avant d'intégrer les institutions ne se posent plus. Cette situation peut se justifier par le fait que les activités proposées par ces différents centres résolvent tous les problèmes vitaux de ces enfants.

Sous l'angle physique, les résultats révèlent que les différents problèmes physiques (douleurs, nausées, fatigues, maladies) ne se posent plus chez les sujets enquêtés. On peut déduire ici que les différentes institutions d'accueil assurent aux enfants une alimentation équilibrée et un suivi médical de qualité, qui réduisent la fréquence de la survenue des maladies. S'agissant de la qualité de vie psychologique, les résultats indiquent que les sujets étudiés présentent un tableau psychologique positif marqué par l'absence de plusieurs troubles de comportement (tels que la déprime, la colère, la peur ...). On peut supposer que depuis qu'ils sont dans les institutions, il y a une forte diminution des facteurs de risque et/ou générateurs de stress (frustration). Ainsi, on peut conclure qu'ils ont eu une prise en charge psychologique de qualité dont les effets sur la santé mentale ont été concluants.

Sous l'angle existentiel, Mbwaka [15] a indiqué que les enfants placés dans les centres d'hébergement n'ont plus de perspectives futures et se perçoivent comme des vauriens. Ce

constat n'a pas été attesté chez nos sujets enquêtés car ils éprouvent un fort sentiment existentiel. Ils ont des perspectives d'avenir et de fortes ambitions. Ils croient, malgré leur vulnérabilité, à un avenir meilleur et radieux. La prise en charge, au niveau de ces centres, a permis à ces enfants de croire à un meilleur avenir. Enfin, les enquêtés ont affirmé avoir une bonne qualité de vie sociale. Ils communiquent facilement et bien avec les personnes les plus importantes de leur vie. Ils sont proches des membres de leur réseau social formel (famille) et sont soutenus de façon exceptionnelle par les éducateurs et assistants sociaux de leurs institutions d'accueil.

En comparant les scores moyens des sujets aux différentes sous-échelles de la qualité de vie, nous constatons que la moyenne de nos sujets à la sous-échelle de la qualité de vie existentielle est supérieure aux moyennes d'autres dimensions. On serait tenté de croire que les institutions d'accueil influencent plus la qualité de vie existentielle des enquêtés comparativement aux autres aspects de la qualité de vie. On pourrait croire que les principales activités de ces institutions sont plus focalisées sur les problèmes existentiels des enfants en les amenant à changer indirectement leur image de soi. En effet, dans la vie de tous les jours, les différentes difficultés auxquelles font face les enfants en situation difficile impactent plus leur identité en les amenant à se percevoir comme des vauriens et des sujets sans avenir. Ainsi, ils ont tendance à avoir une vision sombre de leur avenir et à n'avoir aucun objectif à atteindre durant leur parcours sur la terre.

Dans ce contexte, un enfant qui considère sa vie comme étant inutile ou qui n'est pas satisfait de son existence ne peut en aucun cas s'estimer satisfait de ses conditions de vie. D'où le besoin de privilégier les activités pouvant impacter la qualité de vie existentielle des enfants. Cette importance se justifie par le fait que la qualité de vie existentielle est un moteur qui pousse l'individu à agir afin d'atteindre les différents objectifs qu'il s'est assignés. Ainsi, il peut être un catalyseur d'autres dimensions psychiques telles que l'estime et la valorisation de soi.

3.2. Déterminants de la qualité de vie des enquêtés

La régression linéaire simple a été utilisée, dans ce travail, pour identifier les déterminants sociodémographiques les plus explicatifs de la qualité de vie des sujets enquêtés. Le recours à ce test a été motivé par le constat de la normalité des distributions des résultats et de l'homogénéité des variances.

Tableau 2

Influence des variables sociodémographiques sur la qualité de vie générale

Variables	Coefficients non standardisés		Coefficient standardisé	Test t de Student	Signification
	Beta (β)	Erreur type	Beta (β)		
Age	0,18	0,11	0,13	1,59	0,11
Sexe	-0,41	0,15	-0,19	-2,78	0,006*
Scolarité	-0,06	0,10	-0,05	-0,56	0,58
Parent décédé	-0,12	0,07	-0,13	-1,87	0,06
Durée du séjour au centre	-0,09	0,10	-0,06	-0,85	0,40
Centre	0,09	0,06	0,12	1,48	0,14

* $p < 0.01$

De la lecture du Tableau 2, on constate que seul le coefficient de régression entre le sexe et la qualité de vie générale des enquêtés se révèle significatif ($\beta = -0,19$, $p < 0,01$).

Ainsi, le sexe a eu de l'influence sur la qualité de vie des sujets enquêtés. Le coefficient de régression négatif entre ces deux construits indique clairement la supériorité statistique des garçons comparativement aux filles au niveau de la qualité de vie générale.

Tableau 3

Influence des variables sociodémographiques sur la qualité de vie physique

Variables	Coefficients non standardisés		Coefficient standardisé	Test t de Student	Signification
	Beta	Erreur type	Beta		
Age	0,02	0,06	0,03	0,36	0,72
Sexe	-0,14	0,08	-0,12	-1,64	0,10
Scolarité	0,05	0,06	0,09	0,93	0,36
Parent décédé	-0,04	0,04	-0,08	-1,10	0,27
Durée du séjour au centre	-0,05	0,06	-0,07	-0,88	0,38
Centre	0,02	0,03	0,05	0,57	0,57

Il ressort du Tableau 3 qu'aucune variable sociodémographique n'a influencé de manière particulière la qualité de vie physique des enfants enquêtés ($p > 0,05$).

Tableau 4

Influence des variables sociodémographiques sur la qualité de vie psychologique

Variables	Coefficients non standardisés		Coefficient standardisé	Test t de Student	Signification
	Beta	Erreur type	Beta		
Age	0,03	0,06	0,05	0,56	0,58
Sexe	-0,03	0,08	-0,03	-0,37	0,71
Scolarité	0,04	0,06	0,07	0,67	0,50
Parent décédé	-0,04	0,04	-0,08	-1,14	0,26
Durée du séjour au centre	-0,15	0,06	-0,20	-2,69	0,008*
Centre	0,03	0,03	0,06	0,75	0,46

* $p < 0,01$

Les résultats du Tableau 4 indiquent que seul le coefficient de régression entre la durée du séjour à l'institution d'accueil et la qualité de vie psychologique des enfants placés est significatif ($\beta = -0,20$, $p < 0,01$). Le coefficient de régression entre la durée du séjour et la qualité de vie psychologique révèle que plus le séjour dans les centres se prolonge plus le bien-être psychologique diminue.

Tableau 5

Influence des variables sociodémographiques sur la qualité de vie existentielle

Variables	Coefficients non standardisés		Coefficient standardisé	Test t de Student	Signification
	Beta	Erreur type	Beta		
Age	0,05	0,07	0,05	0,69	0,49
Sexe	-0,06	0,10	-0,05	-0,64	0,53
Scolarité	-0,04	0,07	-0,06	-0,62	0,54
Parent décédé	-0,11	0,04	-0,18	-2,50	0,13
Durée du séjour au centre	-0,06	0,07	-0,07	-0,88	0,38
Centre	0,04	0,04	0,07	0,89	0,37

Du Tableau 5, il ressort qu'aucune variable sociodémographique n'a influencé de manière significative la qualité de vie existentielle des enfants dans les institutions d'accueil ($p > 0,05$).

Tableau 6

Influence des variables sociodémographiques sur la qualité de vie sociale

Variables	Coefficients non standardisés		Coefficient standardisé	Test t de Student	Signification
	Beta	Erreur type	Beta		
Age	0,15	0,07	0,18	2,25	0,03*
Sexe	-0,02	0,09	-0,01	-0,20	0,84
Scolarité	-0,04	0,06	-0,05	-0,56	0,58
Parent décédé	-0,08	0,04	-0,14	-2,00	0,04*
Durée du séjour au centre	-0,19	0,06	-0,22	-2,97	0,003**
Centre	0,08	0,04	0,16	2,06	0,04*

* $p < 0,05$; ** $p < 0,01$

Du Tableau 6, on constate que les coefficients entre la qualité de vie sociale et les variables âge, parent décédé, durée du séjour au centre et l'institution d'accueil sont significatifs. L'ordre d'importance de l'influence de différentes variables sociodémographiques sur la qualité de vie sociale se présente comme suit: (1) la durée du séjour au centre ($\beta = -0,22$, $p < 0,01$); (2) l'âge ($\beta = 0,18$, $p < 0,05$), (3) l'institution d'accueil ($\beta = 0,16$, $p < 0,05$) et (4) le parent décédé ($\beta = -0,14$, $p < 0,05$).

4. Discussion des Résultats

Les résultats de notre recherche ont révélé que les enfants placés dans les institutions d'accueil ont des scores moyens de 2,57; 2,59; 2,51; 2,73 et 2,61 aux différentes sous-échelles de la qualité de vie (générale, physique, psychologique, existentielle et sociale). Ces scores moyens signifient que les sujets enquêtés font preuve d'une qualité de vie satisfaisante. On peut déduire de ces résultats que la prise en charge dans les structures d'hébergement est de bonne qualité car elle améliore considérablement le bien-être des enfants en difficulté. Cette conclusion n'est valide que pour la situation d'ensemble car si on se réfère aux moyennes de la qualité de vie selon les institutions d'accueil, on peut facilement se rendre compte que seuls les centres Ndako Ya Biso et Care Benedicta proposent des services qui impactent d'une manière positive la qualité de vie des enfants, et cela, dans toutes ses dimensions (Ndako ya Biso: QVG - 2,50; QVPh - 2,50; QVPs - 2,60; QVE - 2,88; QVS - 3,00; Care Benedicta: QVG - 2,89; QVPh - 2,80; QVPs - 2,62; QVE - 2,92; QVS - 2,73).

Pour les autres institutions, on enregistre tout de même des sentiments de mal-être chez les enfants placés. A la maison Enrica, il y a un mal-être généralisé (QVG - 2,30; QVPh - 2,48; QVPs - 2,35 ; QVS - 2,40). Au SECAM, les enfants en situation difficile éprouvent une sensation de mal-être général (M - 2,04) et un malaise social (M - 2,48). A l'EEV, on constate que les sujets ont un mal-être psychologique. Avec de telles observations, les résultats de Ministère des Affaires Sociales [11] selon lesquels dans les centres congolais d'hébergement des enfants les conditions de vie dans tous leurs aspects (alimentaire, éducatif, sanitaire, hygiénique ...) sont mauvaises et amènent les enfants à éprouver un sentiment de mal-être ; se trouvent indirectement justifiés.

Ces constats de fluctuation du bien-être selon les institutions pourraient justifier la règle 27 de la protection des enfants vulnérables congolais, règle qui oblige les centres de

placement social d'offrir à l'enfant placé un cadre qui satisfait aux normes d'hébergement de qualité. Cette règle exige aussi à ces structures de s'assurer de la satisfaction de différents besoins des enfants (sanitaires, physiologiques, sécuritaires, scolaires, spirituels...). Dans tous les cas, nos résultats vont de pair avec ceux de Mandiangu et Enguta [13] relatifs à la qualité de vie générale, psychologique, physique et existentielle où il a été constaté une sensation de bien-être. Sous l'angle social, nos résultats entrent en contradiction avec ceux de Mandiangu et Enguta [13] qui ont constaté, à ce niveau, un mal-être social chez les enfants en situation difficile.

En nous basant sur la qualité de vie sociale des sujets enquêtés, on peut affirmer que, dans les institutions d'accueil de l'étude, la règle 23 des standards et normes de la protection des enfants vulnérables congolais exigeant aux structures de maintenir les contacts des enfants avec leurs familles d'origine est respectée. Ces résultats peuvent démontrer que la priorité des structures de placement de l'étude est de réinsérer les enfants dans leurs familles d'origine. La bonne qualité de vie générale constatée auprès des enfants placés de l'étude réfute les résultats de quelques études [5,6,8] qui ont démontré que la qualité de vie des enfants placés en France et dans le monde est significativement en diminution. Ces résultats réfutent aussi ceux de Bourdeleau [16], de Han Ning [17] et de Human Rights Watch [18] où les répercussions négatives du placement des enfants vulnérables dans les structures d'hébergement sur leur qualité de vie générale ont été attestées.

Au niveau de l'analyse différentielle des résultats, on constate que seule la variable sexe a influencé significativement la qualité de vie générale des enquêtés. En d'autres termes, les garçons ont une exceptionnelle qualité de vie générale comparativement aux filles. Ces résultats vont de pair avec ceux de Bronsard [5] où il a été démontré une supériorité des scores moyens des garçons comparativement aux filles au niveau des indices de la qualité de vie. Sous l'angle de la qualité de vie physique et existentielle, les différentes variables n'ont pas impacté sur les résultats.

Sous l'angle de la qualité de vie psychologique, l'influence de la variable durée du séjour au centre a été attestée. Précisément, plus la durée du séjour augmente plus la qualité de vie psychologique des sujets enquêtés diminue. Ces résultats rejoignent ceux d'Ellis, Heidi, Philip, Fisher et Sonia [19,20] qui ont constaté que le séjour prolongé dans une institution de placement social a toujours un impact négatif important sur le développement des enfants.

Les variables âge, parent décédé et durée du séjour ont eu une influence particulière sur la qualité de vie sociale. Au niveau de l'âge, les résultats indiquent que les sujets âgés de 16-18 ans ont une meilleure qualité de vie sociale comparativement aux autres sujets. Ces résultats contredisent ceux de Mandiangu et Enguta [13] ainsi que Bronsard [5] où il a été attesté la non-influence de l'âge sur le bien-être social des enfants vulnérables. Au niveau du parent décédé, il ressort que les orphelins de père ont une bonne qualité de vie sociale comparativement aux autres sujets. Ces résultats s'expliquent par le fait que la mère est, dans la plupart de cas, la première complice des enfants. C'est elle qui est le premier interlocuteur des enfants lorsqu'ils apprennent à communiquer. Son absence a beaucoup plus d'effets négatifs sur le développement des enfants et n'est pas facilement comblée comparativement à celle du père. Dans ce contexte, il est tout à fait normal que les orphelins de mère puissent avoir une qualité de vie déficitaire. Enfin, au niveau de l'influence de la variable durée du séjour au centre sur la qualité de vie sociale des enfants vulnérables, nos résultats réconfortent ceux d'Ellis, Heidi, Philip, Fisher et Sonia [19] où il a été constaté que le séjour prolongé influe sur le bien-être social des enfants.

5. Conclusion

Cette étude a cherché à évaluer la qualité de vie des enfants placés dans quelques institutions d'accueil de Kinshasa et à identifier ses facteurs sociodémographiques les plus explicatifs. Une échelle d'évaluation de la qualité de vie a été administrée à un échantillon aléatoire simple de 210 enfants placés dans cinq institutions d'accueil de la Ville-Province de Kinshasa. Les résultats révèlent que ces enfants ont une bonne qualité de vie, et cela, dans ses différentes dimensions (générale, psychologique, physique, existentielle et sociale). Cette bonne qualité de vie, qui est l'indicateur d'une efficacité des institutions de placement social, est influencée dans certaines de ses dimensions par le sexe, la durée du séjour au centre, l'âge et la nature du parent décédé. C'est pourquoi, il est important que tout prestataire dans les institutions d'accueil tienne compte de ces facteurs qui peuvent, dans certaines situations, renforcer ou inhiber la résilience de ces enfants.

Conflits d'intérêt: Il n'y a aucun conflit d'intérêt.

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Citation: Mwenzi, J.E.; Moseseli, G.M. Qualité de vie des enfants placés dans les institutions d'accueil de Kinshasa et ses déterminants. *Journal of Social Sciences*. 2023, 6 (3), pp. 162-171. [https://doi.org/10.52326/jss.utm.2023.6\(3\).13](https://doi.org/10.52326/jss.utm.2023.6(3).13).

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Submission of manuscripts:

jes@meridian.utm.md

[https://doi.org/10.52326/jss.utm.2023.6\(3\).14](https://doi.org/10.52326/jss.utm.2023.6(3).14)
UDC 314.7:316.3/.4-055.2(630)



CHALLENGES FACING YEMEN REFUGEE WOMEN IN ADDIS ABABA, ETHIOPIA

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Received: 09. 02. 2023

Accepted: 09. 28. 2023

Abstract. Forced migration is associated with several challenges. The challenges that refugee women faced in their host countries were numerous. There has been a gender bias in Ethiopian literature on refugees. Refugees are homogenized in the existing studies. The gender differences among refugees have an impact on the challenges of forced migration that they encounter and how they handle them. Moreover, no study has been done on the adaptation challenges faced by Yemeni refugee women in Addis Ababa. This study's main objective was to examine the challenges that Yemeni refugee women faced in Addis Ababa. An interpretative phenomenological analysis was employed to achieve that objective. Thirteen Yemeni refugee women were interviewed using a semi-structured interview guide to understand their experiences. Purposive sampling was used to choose study participants. The data was analyzed using interpretive phenomenological analysis procedures. The study's findings revealed that refugee women encountered several challenges that were detrimental to their well-being, including language difficulties, limited income and job opportunities, unrecognized identity papers and price increases, and housing problems. Furthermore, refugee women faced social isolation and sexual harassment. The study concluded that the challenges that Yemeni refugee women faced in Addis Ababa had an enormous impact on their well-being, which demands immediate intervention.

Keywords: Addis Ababa, challenges, Ethiopia, refugee women, Yemeni.

Abbreviations: Jesuit Refugee Service (JRS); Refugee and Return Services (RRS); Administration for Refugee and Return Affairs (ARRA); United Nations High Commissioner for Refugees (UNHCR).

Rezumat. Migrația forțată este asociată cu mai multe provocări. Provocările cu care s-au confruntat femeile refugiate în țările lor gazdă au fost numeroase. A existat o părtinire de gen în literatura etiopiană despre refugiați. Refugiații sunt omogenizați în studiile existente. Diferențele de gen între refugiați au un impact asupra provocărilor migrației forțate cu care se confruntă și asupra modului în care le gestionează. În plus, nu a fost realizat niciun studiu privind provocările de adaptare cu care se confruntă femeile refugiate yemenite din Addis Abeba. Obiectivul principal al acestui studiu a fost să examineze provocările cu care s-au

confruntat femeile refugiate yemenite în Addis Abeba. Pentru atingerea acestui obiectiv a fost folosită o analiză fenomenologică interpretativă. Treisprezece femei refugiate yemenite au fost intervievate folosind un ghid de interviu semistrukturat pentru a le înțelege experiențele. Eșantionarea intenționată a fost utilizată pentru a alege participanții la studiu. Datele au fost analizate folosind proceduri interpretative de analiză fenomenologică. Concluziile studiului au arătat că femeile refugiate s-au confruntat cu mai multe provocări care au fost dăunătoare pentru bunăstarea lor, inclusiv dificultăți lingvistice, venituri limitate și oportunități de muncă, acte de identitate nerecunoscute și creșteri ale prețurilor și probleme cu locuința. În plus, femeile refugiate s-au confruntat cu izolarea socială și hărțuirea sexuală. Studiul a concluzionat că provocările cu care s-au confruntat femeile refugiate yemenite în Addis Abeba au avut un impact enorm asupra bunăstării lor, ceea ce necesită intervenție imediată.

Cuvinte cheie: *Addis Abeba, provocări, Etiopia, femei refugiate, yemenite.*

Abrevieri: *Serviciul Iezuit pentru Refugiați (IRS); Servicii pentru refugiați și returnare (RRS); Administrația pentru Afaceri privind Refugiați și Repatriere (ARRA); Înaltul Comisar al Națiunilor Unite pentru Refugiați (UNHCR).*

1. Introduction

International migrants reached a total of 281 million worldwide in 2020, and nearly 50% of the migrants in this group were women [1]. By the end of 2022, 108.4 million individuals were persuaded to leave their homes due to intimidation, hostilities, or abuses of human rights, and 35.3 million of them were refugees [2]. Fifty-one percent of all refugees are women and girls [2]. The 1951 UN Convention relating to the Status of Refugees defined a refugee as: "A person who, owing to a well-founded fear of being persecuted for reasons of race, religion, nationality, membership in a particular social group, or political opinion, is outside the country of his nationality and is unable or, owing to such fear, is unwilling to avail himself of the protection of that country; or who, not having a nationality and being outside the country of his former habitual residence as a result of such events, is unable or, owing to such fear, is unwilling to return to it" [3, p.14].

Seventy-six percent of refugees worldwide were found in low- and middle-income countries, and 52% of them were from Syria, Afghanistan, and Ukraine (6.5 million, 5.7 million, and 5.7 million, respectively) [2]. The top five countries receiving refugees by the end of 2022 were Turkey (3.6 million), Iran (3.4 million), Colombia (2.5 million), Germany (2.1 million), and Pakistan (1.7 million) [2]. Africa is both a source of refugees and a destination for them. In 2022, seven million refugees resided in Sub-Saharan Africa, and in particular, 4.7 million refugees resided in the East and Horn of Africa and the Great Lakes region [2].

Refugees have long been welcomed and hosted in Ethiopia [4]. The country maintains a policy of opening doors for incoming refugees and providing humanitarian assistance for them [5]. Ethiopia is a party to both the 1951 UN Convention Relating to the Status of Refugees and its 1967 Protocol and the 1969 Organization for African Union (OAU) Convention Governing the Specific Aspects of Refugee Problems in Africa(5). Based on these regional and global refugee conventions, Ethiopia ratified a national refugee proclamation in 2004 [4]. The Ethiopian government amended its refugee proclamation in 2019 [5]. This was done to create an enabling legal environment.

Ethiopia is Africa's third-largest host country for refugees, and as of May 2023, Ethiopia hosted 916,436 refugees and asylum seekers, with the majority of them coming from South

Sudan, Somalia, and Eritrea [6]. Fifty-three percent of Ethiopia's overall population of refugees and asylum seekers is female (6). In 2023, most refugees in Ethiopia were hosted in camps [7]. However, there are also urban areas where refugees reside. The capital of the country, Addis Ababa, is home to 74,353 urban refugees, and women make up about 55% of the urban refugee population [8].

Refugees and asylum seekers of many nationalities reside in Addis Ababa. Yemenis are one of the groups [8]. Fighting between Houthi rebels and the Yemeni government triggered the start of the civil war in Yemen in 2015 [9]. Due to the civil war, about 6 million people were compelled to leave their homes [9]. Yemenis applied for refugee status in several countries, including Ethiopia. Following nationality screening processes and registration, Ethiopia's government recognizes Yemenis as *prima facie* refugees [10].

Forced migration is associated with several challenges. Before, during, and after their migration, refugee women experienced challenges. However, the post-migration challenges were the study's main focus. Refugee women experience higher levels of insecurity than refugee men do in their host countries [11]. Although all refugees confront violations of their human rights when they are in exile, refugee women are particularly vulnerable to sexual and gender-based violence [12]. Several studies have been conducted on refugee women's post-migration challenges in developed countries [13-20]. The studies revealed that refugee women face a range of challenges, including social isolation, financial instability, unemployment, and acculturative stress. A qualitative study on refugee women in Sweden indicated that during the resettlement process, refugee women experienced social isolation, psychological problems, and physical health problems. Refugee women also felt pressured to accomplish something worthwhile [15]. Raising children, dealing with discrimination, and feeling isolated were all issues that Congolese refugee women in the United States dealt with on a social and cultural level [19]. Another study further indicated that refugee women in Australia faced challenges including social isolation, economic difficulty, a sense of helplessness, and distress [20].

Studies on the challenges that refugee women encounter in countries with low- and middle-income countries have been conducted [21-26]. The studies showed that refugee women experienced economic hardship, sexual assault, and social isolation. Refugee women in the Republic of South Africa experienced sexual assault and economic insecurity [22]. A qualitative study on Ethiopian refugee women in Uganda indicated that refugee women faced four causes of concern, including concerns between refugees and the local community, abuse by camp staff, intercultural conflicts, and difficulty accessing healthcare [25].

There have been few studies showing the adaptation challenges that refugees face in Ethiopia [27,28]. These studies indicated that refugees lacked social networks and were unable to acquire employment. The challenges that refugees faced in Ethiopia were additionally examined in gray literature, which revealed that refugee women had trouble speaking the local language and had limited access to job prospects [29-31]. But there has been a gender bias in Ethiopian literature on refugees. Refugees are homogenized in the existing studies. The gender differences among refugees have an impact on the challenges of forced migration that they encounter and how they handle them. Women's experiences were commonly neglected in the examination of refugees, even though both men and women were involved [32]. There are, however, a few studies in the gray literature that focus on the challenges that refugee women have in integrating, such as those of Eritrean refugees [33] and refugees from the Great Lakes region [34].

Furthermore, prior studies only offered a limited understanding of the challenges that Yemeni refugee women face in their host countries. Refugee women with different linguistic and cultural backgrounds from their host countries, such as Yemeni refugee women, may experience unique adaptation challenges. To the best of the researchers' knowledge, although there are many Yemeni refugees in Addis Ababa, no study has been done on the adaptation challenges faced by Yemeni refugee women. Following Eritreans, Yemeni refugees are the second-largest urban refugee group in Addis Ababa [8]. Therefore, the study aimed to examine the challenges that Yemeni refugee women faced in Addis Ababa. A study on this issue would help the concerned body design intervention programs that facilitate the adaptation processes of Yemeni refugee women.

2. Material and Methods

2.1. Study design

A qualitative, interpretive phenomenological analysis was employed among Yemeni refugee women who were residing in Addis Ababa, Ethiopia. The meanings that people provide to their experiences are explored and understood in qualitative research [35]. A qualitative research design is preferred because it is important, particularly when working with marginalized groups such as refugees [36]. Through a process of reflective inquiry, interpretive phenomenological analysis illuminates what a lived experience means to the individual [37]. Interpretive phenomenological analysis was chosen for this study because it allows researchers to uncover and interpret the meaning of study participants' lived experiences, such as those of refugee women [38, 39]. Thus, it is the best research approach for eliciting the experiences of adaptation challenges faced by Yemeni refugee women in Addis Ababa.

2.2. Study setting

Addis Ababa is the capital city of Ethiopia and acts as Africa's diplomatic center [40]. Since it lies in the center of the country, a melting pot of people from all backgrounds can be found in Addis Ababa [41]. More than 5.4 million people are predicted to live in Addis Ababa by 2023, making it one of Ethiopia's most populous cities [42]. Every year, a number of people from rural areas migrate to the city in quest of better job opportunities [40]. Refugees from various nationalities also moved to Addis Ababa. Among the urban refugee population, Eritreans made up the majority of Addis Ababa's refugees, followed by Yemenis, Somalis, Congolese, and other nationalities [8]. In 2023, the United Nations High Commissioner for Refugees' (UNHCR), report indicated that 2448 Yemeni refugees resided in Addis Ababa [8].

2.3. Participants and sampling

Refugee women were participants in the study. To recruit refugee women, we worked with an organization working with refugees. We contacted Jesuit Refugee Service (JRS), a humanitarian organization working with refugees. The organization gave us the phone numbers of Yemeni refugee community representatives. We contacted three Yemeni refugee community representatives. All participants were recruited with the help of these Yemeni refugee community representatives. Potential participants were identified by Yemeni refugee community representatives, and we contacted them via phone. For refugee women who meet the study's requirements, the study's objective was described, and they were invited to participate at a time convenient to them. Refugee women were selected purposefully. Purposive sampling was employed to identify participants who experienced the challenges in Addis Ababa.

There are no hard and fast rules when it comes to determining sample size for different qualitative approaches [43]. We initially approached sixteen participants to take part in the study. Two refugee women declined to participate due to their expectation that the semi-structured interview would be emotionally challenging. An information sheet was provided to fourteen participants. Of which one dropped out because she was not interested. We included a total of thirteen participants. The inclusion criteria were: (1) being Yemeni refugee women; (2) living in Addis Ababa; (3) arriving in Ethiopia as a forced migrant at least for one year; (4) being aged 18 years and above; (5) being eager to take part in the study; and (6) having the ability to communicate Arabic. Specifying the minimum time since arrival helped ensure participants could share their experiences with adaptation challenges. We found no new data after interviewing thirteen participants.

2.4. Instrument

A structured interview was developed to collect data about the demographic characteristics of participants. The structured interview guide consisted of seven items that inquired about age, marital status, the highest level of education, length of stay, number of children, if any, and whether or not they had jobs in their country of origin and host country. A semi-structured interview guide was employed to inquire about participants' experiences of adaptation challenges they faced in Addis Ababa. The interview guide made participants talk about their challenges. We chose a semi-structured interview because it would generate rich data and allow us to gain insights into the adaptation challenges of participants. Items of the instrument were reviewed by experts who knew refugee adaptation challenges and those who had experience with semi-structured interview development. Based on the reviewers' comments, we modified a few items that lacked clarity for the participants.

Semi-structured interviews were conducted using the Arabic language, which is the mother tongue of all participants. This required the recruitment of an interviewer who spoke the participants' language and English fluently. Furthermore, the study took into consideration the possible sensitivity of some refugee women to talking to a male interviewer. Hence, one bilingual, master's-level female interviewer in her 20s who knew how to conduct qualitative research, particularly interviews, was recruited.

2.5. Data collection procedure

A female interviewer conducted a face-to-face, semi-structured interview. We played the role of facilitator while the interviewer was conducting the interview. Moreover, we supervised participant recruitment and the interview. We gave the interviewer one-day training about the objectives of the study, the initial items of the semi-structured interview and probing questions, how to familiarize herself with participants, and the study's ethical considerations. Eleven participants were interviewed in their homes. Two of them were interviewed in a well-ventilated private room in JRS.

Ten participants were interviewed once, while three participants were interviewed twice to achieve the depth of the data. Each interview lasted between an hour and two hours. Each participant was given 5 dollars for their transportation and to thank them for their time spent with the interviewer. Data collection took place from July 5 to September 1, 2022. Given the sensitivity of the issue raised in the interview and the possibility of participants becoming distressed either in the middle or at the end of the interview, referral systems were put in place with a counselor at Addis Ababa University Guidance and Counseling Center. However,

during the whole data collection period, no participant was referred to a counselor. The one who interviewed participants transcribed and translated the data.

2.6. Data analysis

The data analysis placed a strong emphasis on understanding the essence of the experiences of research participants, in keeping with the tradition of phenomenological research. The steps developed by Smith et al. (2009) [37] were used to guide the data analysis. Reading and rereading was the first step. We repeatedly read a single transcript to become completely familiar with the data. Initial note-taking was done in the second step. We made initial notes in the transcript's margin when we read a single transcript. The development of emergent themes was the third step. Data about the initial transcript observations were categorized. The fourth step was looking for connections among various emerging themes. Moving to the next transcript was the fifth step. After bracketing the prior transcript, we looked at the subsequent transcript with fresh eyes. For each transcript, we completed the first four steps before proceeding to the next step of the analysis. Finding patterns across transcripts was the sixth step. We analyzed thematic patterns in all transcripts. Based on the hierarchy, superordinate and constituent themes were developed. Moving the interpretation to a deeper level was the final stage. We looked at the recurring themes in the transcripts and made an effort to understand the meaning of the study participants' experiences. Based on the developed hierarchy, the data was presented. Direct quotations extracted from the transcript were presented to illustrate how participants experience the phenomenon.

Reflexivity was ensured through regular discussion among all authors. Given that the principal author had little experience conducting interpretive phenomenological analysis, the senior authors (MA and AM) combined their experiences with the leading author and assisted the leading author in the analysis stage.

2.7. Ethics approval and Informed consent

We submitted the study protocol to the Ethiopian Society of Sociologists, Social Workers, and Anthropologists Institutional Review Board (ESSWA's IRB) for review. We got the ethical clearance approval of ESSWA's IRB to pursue our study with protocol number 010/2022. Before conducting a semi-structured interview, the interviewer provided a written information sheet to participants who could read it. The interviewer described the contents of the information sheet orally to those respondents who could not read. All respondents gave oral informed consent to the interviewer regarding their participation after the objective of the study and the information sheet had been fully described. We chose oral informed consent over written informed consent because we felt oral informed consent would enable participants to speak freely about their experiences. Participants may be reluctant to put their signatures on paper due to the socio-political circumstances of the country.

Respondents received notice that they were free to terminate the interview process at any moment of their choice and refuse to respond to any items of the semi-structured interview. Participants were informed that the research presented no danger or risk to them. Moreover, participants' names were not used to maintain confidentiality. Instead, a pseudonym was used. Participants also gave oral consent to the recording of data and publication of their anonymized responses. An audio recorder (a Sony digital tape recorder, PX470) was used to efficiently capture the semi-structured interviews. As per the requirements for data protection, the recorded tapes were properly kept. The data we collected from all participants in the study were kept anonymous. Confidentiality was assured

throughout the data collection process. In general, we followed the Declaration of Helsinki when conducting the study.

2.8. Trustworthiness of the data

Consensus about what constitutes a high-quality qualitative study is somewhat difficult [43]. However, the trustworthiness of a qualitative study is established through credibility, dependability, transferability, and confirmability [44, 45]. Different verification strategies were used throughout the research process to ensure rigor. Credibility was ensured through extended engagement with participants, member checking, and epoche, or bracketing. The participants were allowed to comment immediately on the interviewer's verbal summary of the transcripts' accuracy. To record the participants' actual experiences, the interviewer spent an extensive amount of time getting to know them. To minimize bias throughout the data collection and analysis stages, we also made our assumptions clear. To comprehend contextual aspects and guarantee transferability, the interviewer gathered thick descriptive data. To ensure dependability, the authors described the processes within the study in great detail. To provide confirmability, an audit trail was established for the data gathering and analysis processes. We also maintained a study record throughout the entire study (a research log) to ensure confirmability.

3. Findings

3.1. Demographic characteristics of participants

Thirteen refugee women were selected, aged between 30 and 60. At the time of the interview, study participants had been residing in Addis Ababa for between three and a half and ten years. Among the participants in the study, four were unmarried, three were married, three were divorced, and two were widowed. Eight participants had at least one child and at most four children, and the rest did not. Among the participants who had children, seven were single mothers. One was illiterate; one completed primary school; two hadn't completed their secondary school; four participants had completed secondary school; and five had completed tertiary education and graduated in their homeland. Among the thirteen participants, six were unemployed in their origin country, and seven were employed. During the time of the interview, seven participants were engaged in either skilled or semi-skilled employment, and the rest were unemployed.

3.2. Challenges

While they were living in Addis Ababa, Yemeni refugee women faced numerous adaptation challenges. The adaptation challenges that refugee women faced were interrelated. Not a single adaptation challenge affected the well-being of refugee women, but rather the interplay (interaction) of several adaptation challenges. The presence of one challenge compounded the other. Each challenge didn't hit each respondent equally. The major adaptation challenges encountered by refugee women were presented as follows.

3.3. Language difficulty

Life was not easy for refugee women to handle in the first three years of settlement because they did not know Amharic, which is the official language of the country. Some refugee women faced a lot of troubles in several areas like shopping, transportation, health centers, educational settings, and navigating the city during the initial period. For instance, Fatim did not know the Amharic language during the initial period. As a result, she was unable to communicate while she was using transport services and shopping. Fatim described that language difficulty was a severe challenge for her because she couldn't know the culture and

the rules of the country due to difficulty in knowing the language of the local community. Participants also faced language difficulties when they went to health centers to seek health services. For example, Aisha went to one of the government healthcare centers in Addis Ababa when she got sick. As she couldn't speak the language, Aisha was unable to describe her illness to the doctor properly. She narrated her story as follows:

Once upon a time, I got sick and went to the government health center. Then the doctor asked me to tell him what made me sick, how could I tell him that I was feeling nausea? It was very difficult for me to describe this word. I didn't know how to describe it. Then I showed him through body language. Then the doctor understood me.

Most of the refugee women stayed in the city for a few more years and learned a few Amharic words, which made it easier for them to communicate with the locals and helped them somewhat overcome challenges brought on by linguistic barriers. For instance, Aisha has overcome some of the difficulties she faced during the initial period after she began learning Amharic. Conversely, participants including Badia, Halima, Afina, and Leila still struggle to interact with the locals using Amharic despite having lived in the city for more than three years. These participants' daily lives were profoundly impacted by the ongoing language difficulty. For example, because of language difficulty, refugee women's social interactions with the local community were still limited. Halima could not communicate with the local community using the Amharic language, which inhibited her social interaction.

The language difficulty created further challenges for refugee women's job opportunities and income. This means language difficulty exacerbates the limited job opportunities and income. Halima couldn't get the job she was interested in Addis Ababa in the formal sector due to a language barrier. Even the jobs she had gotten required her to be fluent in Amharic.

3.4. Limited job opportunities and income

All participants complained about the lack of job opportunities in Addis Ababa. Of course, many young Ethiopian nationals were unemployed due to limited job opportunities in Ethiopia. Unlike those Ethiopian nationals, what was different for refugee women was that their chance to compete and hire in the formal sector was limited because of different factors, including a lack of a work permit, language difficulty, and a refugee identity paper. This made refugee women more disadvantaged than Ethiopian nationals.

Regardless of their educational qualifications, refugee women's job opportunities were limited. There were refugee women who did have the necessary educational backgrounds and work experience in their home country. Refugee women like Badia, Fatim, Afina, Leila, and Halima completed at least their undergraduate education in their homeland. But their chances of getting a job in the formal sector were limited in Addis Ababa. For instance, Halima applied for several job positions when organizations posted vacancy announcements. Nevertheless, no employer called her for an interview simply because of her refugee identity card. She reported:

For the last four and a half years, I didn't get a job. I applied for vacancy announcements in different private and government banks since it is my area of specialization. I also went to several schools to teach Arabic. However, employers did not call me for an interview or further processing. They chose Ethiopians instead of me. They didn't choose me because I'm a refugee.

The limited job opportunities made Halima, Cally, Kalah, Emani, and Leila idle. Halima reported that since she didn't have a job, the only thing she did was eat and then sleep. Sitting

at home without a job affected refugee women's mental well-being. Being idle and worried about different issues can become the source of different psychological problems. Refugee women who didn't have jobs at the time of the interview stated that they experienced psychological problems in different forms. The most common psychological problems were stress and a feeling of hopelessness. These psychological problems were more prevalent, especially for some early adult refugee women and those refugee women who had a job in their homeland. For example, Halima had worked as a customer officer, supervisor, and training specialist in the bank before she came to Addis Ababa. When she came to this country, she became unemployed. Given her age and having a job in her home country, being unemployed in this country caused her depression. She stated:

I want to work. I don't want to stay at home because I'm unemployed. At this time, given my age, it is terrible to stay at home without work. Previously, I worked in different positions in the bank in my country. I didn't come here to stay at home. It gives me depression. I want to work and support myself, my family, and other people.

The limited job opportunities resulted in limited income. Some refugee women couldn't make money and help themselves and their families due to limited job opportunities. Because of a lack of income, some refugee women sometimes encountered financial troubles paying for transportation and buying sanitary pads. Some of the refugee women were also unable to fulfill their basic needs, like clothing and food. Respondents like Cally came to Addis Ababa with nothing because of the war. She only had two changes of clothes. In this country, she couldn't buy clothes and shoes as they were running out. The same is true for Kalah. She said that "When I was in Yemen, I didn't worry about running out of clothes. Because I used to buy clothes and shoes immediately. But after coming here, I was unable to buy clothes and shoes, even though they were becoming scarce".

Some refugee women also faced inadequate food in Addis Ababa. Fatime described that she and her family spent days in Addis Ababa, eating one day and not eating some other days. In a similar vein, Emani reported the days in which she had nothing to eat in her home and couldn't find a person who took care of the food. She described:

I have faced many challenges in this country. I felt hungry in this country. I know there are days when I drink sugar solution only and I sleep in an empty house (she is crying). We had our own home and everything to eat in Yemen. But we came to this country because we could not live in a war. There is no one to help you. If you are on the verge of dying, no one will look up to you. My son and I were not given any food by the landlady while she was watching us. We had nothing to lick or taste during that time.

The lack of income affected the psychological well-being of refugee women negatively. Emani described that "the thoughts about my economic life itself are on the verge of killing me". The limited income also affected refugee women's social interaction. Having limited income forced refugee women not to establish relationships with friends and have get-togethers with their friends. For example, Cally did not show interest in meeting her friends or making new relationships with others due to her limited income. Cally reported:

It is very difficult to meet people when I have little money in my hand. I will not have an interest in meeting with someone. I feel ashamed to meet someone without having money in my hand. I feel bad since I had money before. I see my soul so low, and I'm ashamed. It's hard to beg because I didn't do this before.

On some occasions, refugee women got job opportunities in the formal sector based on their informal social networks. Some refugee women worked in hairdressing and beauty

salons, supermarkets, garment factories, and private schools. However, these jobs do have their limitations. For one thing, refugee women did these jobs for a temporary period. It's kind of on and off. When the job came, they made little money; when it went, they became jobless. They were not permanent jobs.

The second thing is that employers did not pay refugee women like Ethiopians for the same type of job just because of their refugee identity cards. This hurt refugee women's interest in working and later influenced their decision to leave the job. For instance, Cally was employed in one of the hairdressing and beauty salons in Addis Ababa. By doing this job, she used to earn money and lead her family. The employer paid her less money compared to an Ethiopian national just because she had a refugee identity card. In addition to the low payment compared to Ethiopian nationals, she reported that this type of work exposed her to adverse health effects. She stood and worked this job for a long period without rest every day. As a result, she was vulnerable to physical illness. After working there for some time, she decided to quit the job.

3.5. Unrecognized Identity Paper and Associated Challenges

In Ethiopia, it's the Refugee and Return Services (RRS), previously called the Administration for Refugee and Return Affairs (ARRA), that gives identity papers to recognized refugees. The refugee identity card is supposed to serve several purposes for the cardholder. However, in reality, some respondents stated that the identity papers they held didn't serve their intended purposes. To get some services, refugee women were asked to show their identity papers by some organizations. However, when refugees show their identity papers, they are not recognized by them. Consequently, respondents couldn't access the services they needed.

The new refugee proclamation entitled refugees to access banking and telecommunication services under articles 33 and 34, respectively [46]. Despite the law providing them the right to have banking and telecommunication services using their refugee identity papers, some refugee women couldn't access these services. Refugee women like Badia and Halima faced the unacceptability of their identity papers when they went to access banking services. As a result, they were unable to open a bank account, transfer, deposit, withdraw money, or use other banking services. Badia described:

Two weeks ago, I went to the Commercial Bank of Ethiopia to open an account to transfer the house rent. They said that you can't open an account using this ID. Then I went to Awash Bank, and they said the same thing. I went to the authorization office, and they said no. When they read our ID anywhere, they said that we couldn't accept it.

The lack of recognition of refugee women's identity cards excludes them from government-subsidized goods and services. Respondents like Nahir, Kalah, Abia, and Aisha described that employees working in woreda (it is an administrative level that is found below a sub-city in Addis Ababa city) did not accept their identity cards when they tried to issue ration coupons. Woreda gives its residents a ration coupon (a voucher entitling the holder to access a discount on basic commodities from association shops). To get this coupon from the woreda, one has to hold an Addis Ababa city identity card. A woreda works with association shops to give residents basic subsidized goods like sugar, oil, and flour at a reasonable price. When refugee women went to the woreda and requested that they issue ration coupons, employees working in the woreda denied them. Since refugee women could not access basic goods from association shops at fair prices, they were forced to buy these basic goods with

expensive money from the shops. Given the limited financial capacity of refugee women, purchasing basic goods at an expensive price created another financial burden for them. For instance, Nahir stated:

Because I always pay a lot of money to buy sugar in a shop, I wondered one day why I hadn't just gone to woreda and asked for a coupon. I then went to the woreda and asked for a coupon. They informed me that I was unable to obtain a coupon with my refugee identification card. I made an effort to persuade them. They couldn't understand me, though.

The identity card also restricted refugee women's mobility. Respondents mentioned that they were not allowed to go outside of their residence (Addis Ababa) unless they got a permission letter from the office of RRS. RRS gave them an identity card based on their choice of city residence. The police will arrest them if they move outside Addis Ababa and nearby towns without permission. According to respondents, this law restricted their freedom of movement. Due to this reason, refugee women expressed their dissatisfaction. For example, Abia stated:

We cannot go to another city whenever we want. We have to bring a permission (pass) letter from ARRA. If something goes wrong and my friends call me, I can't go to them unless I get a moving permit from ARRA. This means that I am not available for my friends when they need me.

The lack of recognition of refugee women's identity papers increased their vulnerability to social exclusion. Because of the unacceptability of their identity card by some organizations and the local community, Badia and Leila did not feel a sense of belonging. But rather, they felt that they were alienated from the local community.

3.6. Increase in prices in relation to identity

The increment in prices of goods and services associated with inflation is normal for refugees. However, when this increment targeted only refugee women, it became problematic. We found that sellers and profit-making service-provider organizations increase the price of goods and services for Yemeni refugee women, which causes them difficulty in accessing essential goods and services. Participants repeatedly indicated the areas where they faced an increase in prices. These include shopping, restaurants, and transportation.

Respondents stated that whenever they and one of the local community members enter a shop, sellers do not tell both of them the same price. Sellers add to the price, particularly for refugee women. About restaurants, participants reported that when they went to a restaurant, employees working in the restaurant changed the price of the menu for them.

Concerning transportation, refugee women repeatedly faced an increment in tariffs on transport services that targeted only them. Especially if refugee women entered a taxi carrying some items, they were asked to pay a lot of money for them. Driver assistants requested that they pay an extra amount of money on several occasions. Refugee women were forced to pay what was requested since they didn't know the tariff during the initial periods of settlement. Nahir repeatedly faced an increment in transport tariffs while she went from place to place using a taxi. She raised one incident and described it in the following manner:

When I was going from the Megenagna neighborhood to the Bole Arabsa neighborhood, the driver assistant charged other passengers 17 birrs, but he charged me 20 birrs. When I asked him why? He told me that he should have charged me in dollars, not in birrs.

Some factors made refugee women vulnerable to increases in the price of goods and services. The first factor that exposed refugee women to the increase in goods and services was their skin color. Since most Yemeni refugee women's skin color is light, sellers could easily identify that they were not Ethiopians. Consequently, some sellers increased the price of goods and services. Aisha described that "our appearance or skin color exposes us to being known by people. They see our skin color and say that these are Arabs or Diaspora people who have money".

There are refugee women whose skin color looks Ethiopian (e.g., Halima, Marya, Cally, Kalah, and Iman). Most of these refugee women have Ethiopian decedents, usually their mothers. Some of these refugee women struggled to speak Amharic (Halima and Iman), while others could speak at the time of the interview (Marya, Cally, Kalah, and Iman). Those refugee women whose skin color was Ethiopian and who could speak Amharic were less vulnerable to price increases than those who struggled to speak Amharic. Those refugee women whose skin color is the same as Ethiopians are usually born and raised in Yemen. For instance, Halima's skin color resembles most Ethiopians' skin colors. However, she was unable to communicate with sellers properly using Amharic. Understanding this, sellers increased the price of goods and services for her many times. She said:

When I went to shops, the sellers thought that I was Ethiopian. I seem just like an Ethiopian in terms of skin color. When I started to speak, they realized that I'm not Ethiopian. They started to cheat me. If the price of something is 100 birr, they asked me to pay 1000 birr.

Dressing style was a second factor that made refugee women vulnerable to an increment in price. Sometimes, when refugee women go to a shop or other marketplace wearing an Abaya (a full-length dress worn by Muslim women), sellers increase the price of goods and services. As per participants, sellers could identify Abaya as coming from Middle Eastern countries. Those Yemenis who dressed in Abaya but were able to speak the language were fortunate. They communicated with sellers in Amharic and purchased the things at the correct price.

3.7. Housing problem

All respondents reported that the housing problem was the most severe challenge that they faced in Addis Ababa. The cost of house rent is extremely difficult for refugee women. The lack of affordable housing increased refugee women's vulnerability to financial hardship. Just because of the high cost of house rent, refugee women were forced to reside in poor housing conditions, like small, crowded, and poorly equipped houses.

Increasing the house rent may be a problem for most city residents. However, for refugee women, the situation is worse. The housing problem is compounded for refugee women because it is associated with limited job opportunities and income and with their refugee status. Refugee women faced intersections between limited job opportunities, income, and refugee status, which exacerbated refugee women's housing problems.

Based on the type of houses in which they resided, we categorized refugee women into two groups: condominium houses and compound houses. The first group included refugee women who rented condominium houses on the outskirts of Addis Ababa. Except for Aisha, who lived in a condominium house downtown, respondents like Cally, Fatim, Kalah, Leila, and Nahir were included in this category.

Some challenges refugee women faced when renting condominium houses. The first challenge was that the house lords/ladies did not keep the contract and increased the house

rent unreasonably. For condominium houses, there is a contractual agreement that has to be made between the house lord or lady and the tenant. The landlord or lady and the tenant sign for a certain time, usually 6 months or a year. When the tenant wants to continue, he/she is expected to renew the contract every specified period. The Addis Ababa city administration passed a regulation that banned an increase in residential home rent for six months at the time of data collection. However, some house lords/ladies were not abiding by the contract and the city administration's regulations and increased the rent. Refugee women were told by the landowners or ladies that they could leave their homes if they didn't pay the requested rent. Since refugee women couldn't afford the required money, they were forced to change the houses they resided in and were looking for another house. Their tenure in one house became very short. This created a huge problem for refugee women. Nahir narrated as follows:

The most severe challenge is house rent. Before I finished the contract, house renter told me I had to increase the price. I said I didn't finish the contract, and the house renter said no. Due to this reason, I changed the house four times. In our country, with or without a contract, some people can rent houses. When the situation becomes difficult, the government announces that no one can increase the rent. In this country, despite the government's passing the regulation that bans an increment in house rent fees, landlords and ladies were not abide to this regulation.

House lords/ladies increased the price of house rent not only for the already existing tenants but also for potential refugee women who would like to rent houses. House lords/ladies looked at refugee women's skin color, and when they understood that they were not Ethiopians, they told them an inflated price. According to respondents, some house lords/ladies considered them foreigners who could pay the required money. This is associated with the belief that Yemeni refugees were rich. As a result, house lords/ladies increased house rent unreasonably every time for those refugee women who rented their houses and for potential tenants. Aisha wanted to change her previous house and asked the landlord to rent it. The landlord asked her to pay twice the previously rented money. She said:

As a refugee, when I tried to rent a house, house renters increased the price. What happened to me recently was that the house I wanted to rent was being rented for 5,000 birrs. However, the landlord informed me that the rent for this house is 10,000 birrs because I am an Arab. I asked him to rent me 6,000 birrs. But he refused. I gave up renting this house for this amount of money and turned my face to rent another house.

The second challenge was the advance payment. When refugee women were forced to leave the houses in which they resided due to an unreasonable increase in price, they looked for another house to rent. In their attempt to rent a house, they faced another challenge: the advance payment. Especially for refugee women who have children, this situation worsens. For instance, the house lord increased the price of the house on Cally. As a result, she was forced to change houses. When she wanted to rent another house, she was asked to pay three months advance payment by the landlord. Given how jobless she was, it was difficult for her to pay the three-month advance payment. She said:

As a refugee, being homeless is very difficult. I went to the Bole Arabsa neighborhood and wanted to rent a condominium house. The house lord asked me to pay him three months in advance. I don't have a job. Where can I get this money from? On top of

that, I'm expected to pay money to the broker. Where can all this money come from? It's difficult.

The second group included refugee women who lived in compound houses in marginal parts of the city. Except for participants who lived in condominium houses, the rest of the respondents resided in compound houses. Refugee women who couldn't afford to rent condominium houses live in compound houses. Due to the constant increase in house rent, refugee women live in crowded rooms. It's challenging, especially for refugee women with children, to live in a small room. Refugee women's housing conditions in Addis Ababa were very low compared to the house they used to live in. It was hard to accept this reality for refugee women. Iman was persuaded to live not only in a small house but also in poor housing conditions with dirty carpets, pest infestations, and a very cold temperature. She said:

If you look at my house, it looks like a cowshed; the floor is wet, and the roof is full of dirt. A house like this is never a house where people spend a single night. The toilet is next to me; it's very cold. I'm cleaning the floor at night to get rid of worms. Apart from that, we live in a small room with my children, which is very difficult.

In a compound house, the landlord/lady may have a number of rental homes. Tenants were permitted by landlords/ladies to rent houses. Refugee women make up one of the tenants. Within a compound, a large number of neighbors, including refugee women, are living together. While they were living in a compound house, respondents faced uncleanliness and long queues in the restrooms. Refugee women were sharing the same restroom with other neighbors. Given that they used to use personal restrooms in their country, sharing restrooms with other people became difficult for them. Usually, shared restrooms were not clean, and all renters were not responsible for cleaning the restroom. Besides this, respondents complained that there was a long queue to use the restroom, especially in the morning.

Refugee women faced rejection by landlords or ladies to rent their houses to big families in compound houses. Most landlords/ladies were not interested in renting their houses to large families. In relation to restrooms and the consumption of electricity and water, most landlords/ladies didn't rent their houses to large families of refugee women. This forced refugee woman like Leila to rent condominium house, even though it was expensive. Leila stated that "My family's size is seven. We can't rent a house in a compound because landlords don't want to rent to large families like us".

3.8. Social Isolation

A refugee woman who came from a more collectivist culture like Yemen found it difficult to live in exile, separated from her family, relatives, and friends. Refugee women reported that they faced social isolation due to changes in culture and language. Consequently, they felt that they were isolated from their existing social ties. For instance, Halima missed not only her family but also her neighbor and friends. At times, she felt sad and alone.

Social networks were crucial in promoting the well-being of refugee women. Refugee women were unable to speak with their families in person. Refugee women lacked strong social networks to turn to when problems arose. They kept all their suffering inside themselves. All of their sadness was contained within them. Refugee women experienced loneliness as they lost the previous social network that provided them with comfort and safety.

According to respondents, the holidays made them feel even more lonely. For the respondents, celebrating a holiday while apart from one's family, friends, and relatives was not a holiday. The holiday was something they used to share with their friends, family, and neighbors. However, there was nothing like it in this country. They consequently felt awful. Leila stated that "When a holiday comes, I spend it feeling broken inside". Similarly, Aisha used to celebrate Ramadan together with her family, relatives, and friends in her homeland. When she came to Addis Ababa, she missed all these things. In this country, she did not cheerfully celebrate the holiday. Aisha reported:

I feel bad when Ramadan comes. It is not pleasant to celebrate a holiday outside your homeland. Sometimes I say that it is good if a holiday doesn't come because I used to celebrate Eid by buying a sheep, wearing new clothes, painting our hands, and buying cookies and chocolates. I cannot fulfill all these things in this country and celebrate Ramadan (she is crying). To some extent, I buy new clothes, chocolate, and juice for my kids during the holidays to keep them from getting sad.

3.9. Sexual harassment

In Addis Ababa, refugee women faced sexual harassment by men in various areas, including on the street, in hospitals, and at work. Respondents stated that men didn't say a woman was young or old when they sexually harassed refugee women. Refugee women experienced incidents of sexual harassment while they went to the hospital to seek health services. Some male health professionals were sexually harassing refugee women when they went to them for medical treatment. As a result, respondents did not get medical treatment. For instance, Nahir disclosed her personal experiences, saying that "I went to a hospital when I was sick. When the doctor saw me, he saw me differently, and he harassed me. I told the doctor not to add another pain to my already painful life and left that hospital without getting treatment". While Nahir faced sexual harassment in the hospital, Aisha faced it in her workplace. Aisha experienced sexual harassment while she worked in Merkato (the largest marketplace in Africa). Some men approached her and offered to have a child with her. She said:

Many men at work harassed me. There are business owners who say that they want to marry me or spend one night with me. For example, when I ask them to rent a shop in Merkato, they say that if I am not for them, they will not rent the shop. Or if I slept with them for one night, they would fill the shop and give it to me.

Sexual harassment was exacerbated due to the refugee status of the respondents. The incidence of sexual harassment caused refugee women to experience negative psychological consequences, such as being overly suspicious and avoidant.

4. Discussion

This qualitative interpretive phenomenological analysis study examined the adaptation challenges Yemeni refugee women faced in Addis Ababa. The study's findings revealed that language difficulties pose many challenges for refugee women in a range of contexts, including transportation, healthcare settings, educational settings, and city navigation. The language difficulty negatively affected refugee women's social interaction with the local community, job opportunities, and income. Similarly, according to studies that have already been conducted [18,47-50], refugee women have language barriers in host countries. According to studies done in Ethiopia with Eritrean refugees [29] and refugee women from the Great Lakes Region [34], refugees had difficulties integrating with the local

community because of language barriers. This demonstrated the necessity of developing Amharic language learning programs for refugee women and providing interpretation services.

The study also indicated that refugee women faced limited job opportunities and income. Regardless of their educational backgrounds, refugee women had limited job opportunities. Limited employment opportunities led to limited earnings. Refugee women were unable to meet their basic needs because of their limited incomes. Refugee women had psychological as well as social problems as a result of their limited income. In a few instances, refugee women got temporary employment in the formal sector, and they received lower wages than Ethiopian citizens did. Similar to this study, other studies [20,22,51-53] found that refugee women had difficulty finding employment and earning money in host countries. Studies carried out in Ethiopia also showed that refugees had limited access to activities that generated income and were unable to acquire a means of subsistence [27,28]. Our study found that the lack of a work permit, language barriers, and a refugee identity paper all had an impact on employment opportunities for refugee women. Existing literature also confirmed that the limited job opportunities and income for refugee women could be attributed to language difficulty [47] and refugee status [54]. Enhancing refugee women's economic well-being is crucial through providing job trainings, giving refugee women access to small business loans, and giving refugee women a work permit.

Additionally, the study's findings showed that some organizations and individuals did not accept the identity cards of refugee women. They were unable to get services they needed as a result. In addition to excluding them from government-subsidized goods and services, the lack of recognition of refugee women's identity cards also restricts their movement. Furthermore, the unrecognized refugee identity card increased refugee women's feelings of isolation. The lack of acceptance of identity papers may be attributed to discrimination and a lack of significant relationships in the community [55]. Similarly to this, a study indicated that refugee women often experienced rejection from the community because of their identity papers [56]. This suggested that efforts should be made to teach the local community about the rights of refugees to increase acceptance and lessen discrimination. In addition, refugee women should receive legal assistance to remedy the problem with the unrecognized refugee identity card.

The study's findings additionally indicated that prices for refugee women had increased in areas like restaurants, shopping, and transportation due to their identity. Sellers and service-providing organizations commonly thought that Arabs (Yemeni refugees) were rich. Refugee women were more susceptible to price increases due to their skin color and clothing. In response to this, studies demonstrated that local communities discriminated against refugee women based on their identification [23,51,54]. Following intersectionality theory, refugee women were placed into various groups based on their status as refugees, the color of their skin, and their style of dressing in the host country [57]. These interrelated factors made Yemeni refugee women more susceptible to price increases. It was suggested that raising local communities awareness to end discriminatory practices and educating refugee women about how to report unfair price increment practices.

The study found that housing problems were a challenge for refugee women in Addis Ababa. Refugee women are unable to afford the cost of house rent. Refugee women were forced to live in poor housing conditions, such as cramped, small homes with inadequate amenities, just due to the high expense of rent. The intersections between limited job

opportunities, income, and refugee status exacerbated refugee women's housing problems. This study's findings are supported by studies carried out in the host countries [53,58-60], which found that refugee women had a housing problem. We recommended providing financial support to refugee women to enable them to rent houses that are secure, stable, and within their price range and drafting legislation to protect tenants from discrimination based on the color of their skin and status as refugees. Furthermore, giving refugee women greater job opportunities would help them acquire employment, which in turn would improve their housing conditions.

The study also found that refugee women faced social isolation. Being separated from family members, relatives, and friends caused refugee women to experience feelings of loneliness and isolation. In line with our study, several studies indicated that refugee women faced social isolation in host countries [14-20,49,58]. Eritrean refugees residing in camps in Ethiopia faced a high degree of social isolation [28]. Participants in our study reported feeling socially isolated as a result of linguistic and cultural barriers. As evidence for this study, previous studies found that social isolation among refugee women in host countries was a result of cultural differences in customs and traditions [61], language barriers, and acculturative stress [62]. Therefore, it could be crucial for concerned bodies to develop integration programs, including providing local language and cultural orientation pieces of training and letting them participate in cultural programs.

Finally, the study's findings revealed that refugee women experienced sexual harassment by men in Addis Ababa, including on the street, in hospitals, and at places of work. Due to sexual harassment, refugee women encountered psychological problems like being overly suspicious and avoidant. In line with this study, existing studies indicated that refugee women faced sexual harassment both within and outside of refugee camps [22-25,61,63]. This suggested that efforts should be made to educate the local community about sexual harassment and assist refugee women in obtaining legal and psychosocial support.

5. Conclusion

Refugee women faced several challenges in Addis Ababa. Refugee women faced language difficulties, which negatively affected their social interaction with the local community, job opportunities, and income. Refugee women also faced limited job opportunities and income, which limited their ability to meet their basic needs and caused them to experience psychological and social problems. Moreover, refugee women faced a lack of recognition of their identity cards by some organizations and individuals and a price increase in relation to their identity. Refugee women found it difficult to pay their rent. Finally, refugee women faced social isolation and sexual harassment in Addis Ababa, which affected their psychological well-being. In general, the challenges that Yemeni refugee women faced in Addis Ababa had an enormous effect on their well-being which demands immediate intervention.

Funding. Both Wolaita Sodo University and Addis Ababa University provided funding for the study. Funders did not participate in the design of the study, data collection, analysis, manuscript preparation, or decision to submit the manuscript for publication.

Acknowledgements. We would like to thank study participants for providing the data and their time. We are also grateful to Addis Ababa University and Wolaita Sodo University for funding.

Conflicts of Interest: The authors declare no conflict of interest.

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Citation: Adamek, M.; Amare, S.; Minaye, A. Challenges facing yemen refugee women in Addis Ababa, Ethiopia. *Journal of Social Sciences*. 2023, 6 (3), pp. 172-191. [https://doi.org/10.52326/jss.utm.2023.6\(3\).14](https://doi.org/10.52326/jss.utm.2023.6(3).14).

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LINO BIANCO – THE RING METAPHOR AND THE SPIRIT OF SOFIA AND OTHER ESSAYS

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Received: 08. 22. 2023

Accepted: 09. 14. 2023

Abstract. This article is a review of the publication *The Ring Metaphor and the Spirit of Sofia and other essays* by Lino Bianco. The book was published by Kite Group, Hamrun, Malta, 2022 with ISBN 978-9918-23-053-2 (Hardback) / 978-9918-23-054-9 (Paperback). Bianco is an architect and an academic and Ambassador Emeritus of the Republic of Malta to the Republic of Bulgaria.

Keywords: *book review, architectural history, architectural philosophy, culture of architecture.*

Rezumat. Acest articol este o recenzie a publicației lui Lino Bianco *The Ring Metaphor and the Spirit of Sofia and other essays*. Cartea a fost publicată de Kite Group. Hamrun, Malta, 2022, ISBN 978-9918-23-053-2 (Hardback) / 978-9918-23-054-9 (Paperback). Bianco este un arhitect, profesor și ambasador onorific al Republicii Malta în Republica Bulgaria.

Cuvinte cheie: *recenzie de carte, istorie arhitecturală, filozofie arhitecturală, cultura arhitecturii.*

Book review

The Ring Metaphor and the Spirit of Sofia and other essays was published last year in Malta by Kite Group [1]. It was endorsed by important scholars and academics (see Figure 1). It has six chapters, articles which are in the journal of the Faculty of Theology of the University of Malta *Melita Theologica*. These chapters follow a foreword and an introduction. The foreword is written by King Simeon II (see Figure 2). It points to a talk given by Bianco, then Ambassador of Malta to the Republic of Bulgaria, at School 32 'St Kliment Ohridski' on 19 April 2018. It gives an idea of the respect that the Tsar has of the author. This foreword is followed by an introduction by the philosopher and cultural theorist and the ambassador emeritus of the Republic of Bulgaria to the Holy See and to the Sovereign Military Order of Malta Professor Vladimir Gradev.

The first chapter is on Sofia. Bianco states that the Bulgarian capital is the ecumenical city of Europe [2]. The second addresses Valletta, the capital city of Malta, as a metaphor [3].

The third is on the idea of truth in buildings of London constructed after World War II [4]. The fourth is on Georg Hegel's idea of Gothic architecture and concludes by suggesting that the architecture of Ludwig Mies van der Rohe is Hegelian [5]. The fifth chapter, written with Saviour Catania, focuses on the French film directed by Alain Resnais *L'Année dernière à Marienbad* [6]. The last chapter, written with Marlene Gatt and Irene Dillon, addresses music [7].

Kite
NEW TITLE

THE RING METAPHOR AND THE SPIRIT OF SOFIA

and other essays

Lino Bianco
with a foreword by HM King Simeon II

“This collection of thought-provoking essays written by my colleague Professor Lino Bianco demonstrates the inquisitive and outstanding intellect of the author, and reflects his unique experience in architecture, diplomacy and academia. Significantly, these essays were published in the *Melita Theologica*, a venerable journal issued by our Faculty of Theology. Professor Bianco, through his work, offers a valuable exposition of ideas which will enrich the reader who wishes to engage in a deeper understanding of architecture and related disciplines.”

DAVID ATTARD – Chancellor, University of Malta, Msida, Malta

“Professor Lino Bianco's current book reconnects architecture with the artistic and spiritual realms. His erudite studies seek the deep mental and symbolic connections – ‘the soul of space’ – in both historical and current architectural contexts. These essays reveal the timeless existential and mental qualities in the art of building.”

JUHANI PALLASMAA – Hon SAFA, Hon FAIA, Int FRIBA, Professor Emeritus of Architecture, Aalto University, Helsinki, Finland

“An excellent addition to the global architectural library. In this book Lino Bianco helps us understand the interplay of space and time as phenomena attached to the production of architecture. Weaving connections between several narratives ranging from historical precedents in Sofia and Valletta to philosophical underpinnings and from drama, music, and religion to Post-War British architecture, this book revitalises the role architecture and art forms play in the construction of physical and social realities.”


ASHRAF M. SALAMA – Professor of Architecture and Director of Research, University of Strathclyde, Glasgow, United Kingdom

“This collection of papers by Lino Bianco demonstrates his academic intellectual multi-disciplinarian prowess; a manifest testimony of his polymathic dialectic dexterity. Bianco's writings provide proof of his multifaceted attributes both as savant philosophical thinker and scholarly pedagogue. The complex thematics tackled in this publication are testimony to a profound recondite sagacity.”

RICHARD ENGLAND – Hon FAIA, Professor Emeritus of Architecture, University of Malta, Msida, Malta

“Lino Bianco gathers some of his papers, previously published in a theological ambiance, in a book. These well written essays are old school meditations on profound topics pertaining to architecture, aesthetics and, why not, theology. This book is a proof that, on top of his many hats, Bianco is also a thinker.”

AUGUSTIN IOAN – Professor of History and Theory of Architecture; former Vice-Rector, Ion Mincu University of Architecture and Urbanism, Bucharest, Romania



ISBN: 9789918 230549 (Paperback)
9789918 230532 (Hardback)

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Figure 1. Flyer for the book issued by Kite Group which includes the endorsements.

This publication has been endorsed by a number of scholars. From Malta, it was endorsed by the Chancellor of the University of Malta Professor David Attard and architect Professor Richard England. Foreign scholars include Professor Juhani Pallasmaa (Helsinki, Finland), Professor Ashraf Salama (Glasgow, Scotland) and Professor Augustin Ioan

(Bucharest, Romania). All stated that this book gives an insight to the multi-disciplinary education of an architect-philosopher preoccupied with space, place and time. The book is of interest to scholars, researchers and students of architecture and cultural studies.



A collection of essays has the advantage that each piece of writing can be read as a unit. It is a different experience from that of reading a book. This publication, a compilation of papers, is a journey through a number of themes, generating thoughts and reflections on specific questions pertaining to philosophy, architectural history and cultural studies.

The papers in this book are mainly authored by Lino Bianco, the Ambassador Emeritus of Malta to the Republic of Bulgaria, whose love for Bulgaria stems from scholarly work undertaken on our Capital City over a decade ago. Indeed, a scientific article in which Bianco argued that Sofia is the Ecumenical City par excellence, a truly fitting designation for our Capital, lent this publication its name.

The humanistic education of Bianco is a signature of his diplomatic work in Bulgaria. His intellectual reading of Sofia, and indeed Bulgaria, is inspiring. The question ‘What do you hate about Bulgarians?’ was posted to him by a higher secondary level student in the presence of the media. His response, revealing his understanding of the Bulgarian psyche, was: “You should not speak negatively about your country; it is your guardian. Bulgaria is a lovely country; you have many reasons to feel proud of it and its wonderful people and nature”. Bianco concluded his intervention by making reference to a popular symbol of our country: “Bulgaria is the land of roses: the sharper the thorns, the more beautiful is the rose and it is this that matters most”.

This inspirational statement is truly touching and illustrates ambassador Bianco’s sensitive insights into Bulgaria’s past, present and future.

Figure 2. Foreword by Tsar Simeon II.

About the author

Lino Bianco is an architect, engineer, academic and diplomat who completed his doctorate at the University of Architecture, Civil Engineering and Geodesy (UACEG), Sofia, under the academic supervision of the late Professor Vesselina Troeva [8, 9]. He is currently a full-time resident academic at the University of Malta [10] and visiting professor in several countries including Bulgaria where he is guest lecturer at UACEG [11], and a non-resident ambassador of Malta to Romania and the Republic of Moldova [12]. During his time as non-resident ambassador of Malta to Bulgaria, Bianco was invited and gave speeches at several institutions such the Bulgarian Academy of Sciences and other institutions of higher learning and also to schools such as School 32 ‘St Kliment Ohridski’.

The author has been acknowledged by official state awards by the Republic of Bulgaria (Order of the Madara Horseman, First Class, 2018), the Sovereign Military Order of Malta (Cross of Commander Pro Merito Melitensi, 2019), and the Republic of Malta (Member of the Order of Merit, 2021).

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Citation: Andonova I. Lino Bianco – The ring metaphor and the spirit of Sofia and other essays. *Journal of Social Sciences*. 2023, 6 (3), pp. 192-196.

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